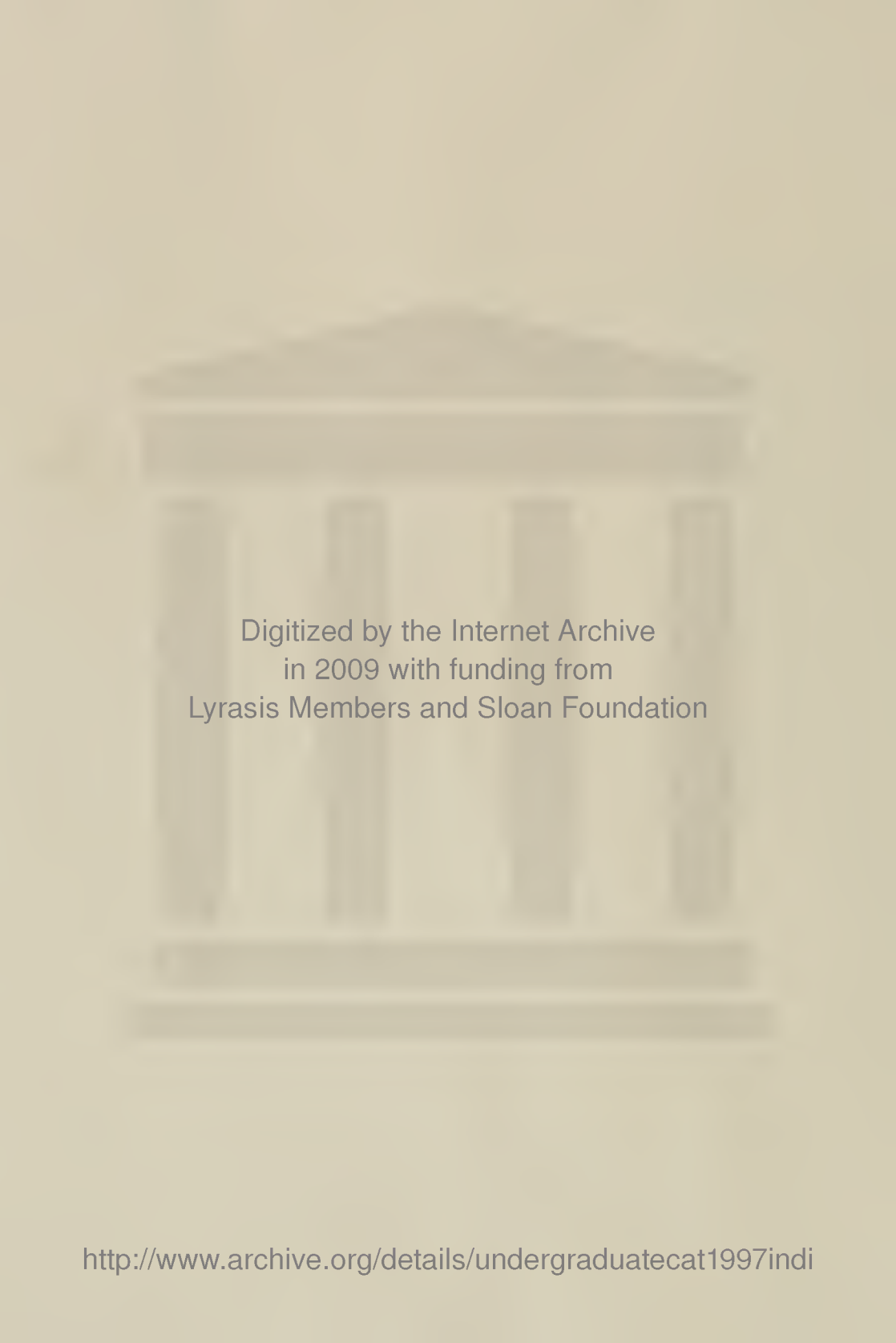
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http://www.archive.org/details/undergraduatecat1997indi

# Indiana University of Pennsylvania

# *1997-98 Undergraduate Catalog*

*This bulletin contains announcements of courses for the academic year 1997-98. IUP reserves the right to repeal, change, or amend the rules, regulations, courses, and programs contained in this bulletin at any time. Tuition and fees are also subject to change.*

*According to IUP's Mission Statement, "...The university community must be supportive of and open to all scholars regardless of race, religion, creed, age, sex, disability, or ethnic heritage..." Full participation from each member of the university community in activities that support this mission is encouraged. Each member of the university community has a right to study and work in an environment free from any form of racial, ethnic, and sexual discrimination. In accordance with federal and state laws, the university will not tolerate racial or ethnic discrimination or discrimination on the basis of disability.*

Indiana University of Pennsylvania is committed to equal opportunity and affirmative action for its students, employees, and applicants. The university is committed to providing equal educational and employment rights to all persons without regard to race, color, sex, religion, national origin, age, disability, ancestry, or sexual orientation.

This policy is placed in this document in accordance with state and federal laws including Title VI and VII of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and the Civil Rights Act of 1991 as well as all applicable federal and state executive orders. This policy extends to disabled veterans and veterans of the Vietnam era.

**Please direct all general inquiries regarding equal opportunity and affirmative action to:**

Interim Director of Human Resources
G-1 John Sutton Hall, Indiana, PA 15705
Telephone: 412-357-2431, Fax: 412-357-2685
TD: 412-357-2481

**TD: Telecommunications Device** available in the
Advising and Testing Center, 412-357-4067
(V/TD) (8:00-4:30, M-F)
Office of Human Resources, 412-357-2481
(TD) (24 hours)
Campus Police, 412-357-2141(TD) (24 hours)

**IUP ensures compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act through the provision of program access accommodations. Please direct inquiries regarding accommodations for persons with disabilities to:**

**Student Concerns:**
Dr. Catherine Dugan
Director, Advising and Testing Center/
Disability Support Services
504 Coordinator
106 Pratt Hall
Telephone: 412-357-4067

**Employee Concerns:**
Ms. Helen Soltis
G-1 John Sutton Hall
Telephone: 412-357-2431

**Specific inquiries regarding Title IX should be directed to:**
Ms. Rhonda Luckey
Director, Pechan Health Center
Pechan Health Center
Telephone: 412-357-6475

*IUP is a member of Pennsylvania's State System of Higher Education.*

# Indiana University of Pennsylvania

# *1997-98 Undergraduate Catalog*

IUP, Indiana, Pennsylvania 15705
*http://www.iup.edu*

# University Calendar

**Fall Semester, 1997**

| | |
|---|---|
| Registration | September 2 |
| Classes begin | September 3 |
| Thanksgiving recess begins at end of night classes | November 25 |
| Classes resume (8:00 a.m.) | December 1 |
| Reading Day | December 13 |
| Final exams | December 15-23 |
| December Commencement | December 21 |

**Spring Semester, 1998**

| | |
|---|---|
| Registration | January 19 |
| Classes begin | January 20 |
| Spring vacation week of | March 9-15 |
| Classes resume (8:00 a.m.) | March 16 |
| Reading Day | May 5 |
| Final exams | May 6-14 |
| May Commencement | May 16 |

**Summer Sessions, 1998**

To be announced

# Inclement Weather Policy

Indiana University of Pennsylvania is committed to the safety and security of its students, faculty, staff, and visitors. As such, the decision whether the university should close or remain open during periods of adverse weather conditions is based on the overall concern for the university community. In general, however, IUP's practice will be to remain open and to conduct classes and business as usual during periods of inclement weather.

**Closure of the University:** Should adverse weather conditions arise or be anticipated that would make it inadvisable to operate the university on a given day, the president may, at his discretion, close the institution (i.e., cancel all classes and on-campus activities at all campuses). In the event of either a full or partial day closure, notification will be provided to the following radio and television stations: WDAD Radio (Indiana), WCCS Radio (Homer City), WJAC-TV (Johnstown), KDKA-TV and KDKA Radio-1020 AM (Pittsburgh), and WTAE-TV and WTAE Radio-1250 AM (Pittsburgh).

**Cancellation of IUP-Sponsored Activities or Events in the Absence of University Closure:** Should adverse weather conditions arise or be anticipated that would make it inadvisable to conduct an IUP-sponsored activity or event on a date when the university otherwise remains open, the sponsoring unit/department has the option to cancel or postpone the function. The sponsoring unit/department also assumes responsibility for notifying event participants of the cancellation/postponement in an appropriate and timely manner.


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# President's Message

*Congratulations on your decision to experience the exciting intellectual, cultural, and social world of Indiana University of Pennsylvania.*

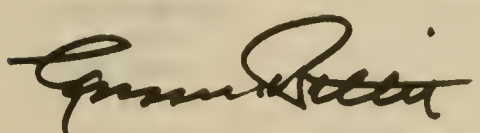
*The only university in Pennsylvania's State System of Higher Education to confer doctoral degrees, IUP attracts faculty members who are on the cutting edge of their fields but are committed to undergraduate teaching. Outstanding programs in more than a hundred majors, from the traditional liberal arts and sciences to such professional fields as nursing, business, criminology, and safety sciences, offer a broad array of academic challenges. Classrooms and residence halls equipped with fiberoptics and cable television support a rich academic tradition in which students actively participate in the learning process.*

*IUP stretches the boundaries of the academic environment to include learning experiences, through research and internships, that prepare students for careers in the global marketplace. The university's internship program places students in a variety of professional settings, from the European Parliament to* Fortune *500 companies to the White House. IUP's rigorous Liberal Studies requirement, emphasizing communication skills and analytical thinking, ensures that all our students are prepared for life as well as for a career. Longstanding excellence in the fine arts creates a campus life rich in cultural and entertainment opportunities. IUP's global partnerships bring a cosmopolitan student body to Indiana and provide attractive opportunities to study abroad.*

*The Robert E. Cook Honors College at IUP is an exciting model that combines for especially gifted students intellectual engagement and service, reflecting the university's values of high intellectual achievement, personal development, commitment, and volunteer service.*

*Strong academic programs are complemented by the university's successful athletics program. Fans from across the region enjoy not only highly competitive teams but one of the country's top marching bands.*

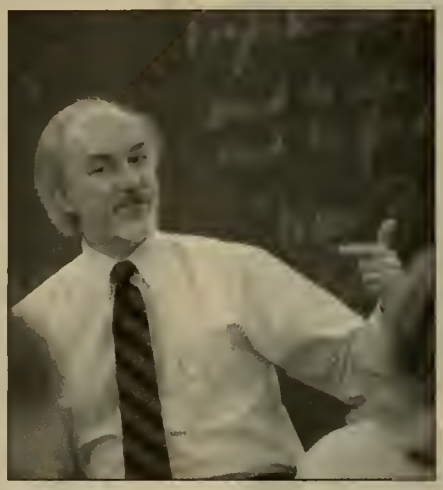
*On behalf of the IUP family, I take pleasure in welcoming you.*



Lawrence K. Pettit, President

# Undergraduate Degrees Offered at IUP

**Bachelor of Arts**
- Anthropology (Tracks available: Applied Anthropology, Archaeology, and General Anthropology)
- Art/History Track
- Art/Studio
- Biology
- Chemistry
- Computer Science
- Criminology
- Criminology/Pre-Law
- Economics
- Economics/Mathematics
- Economics/Pre-Law
- English
- English Pre-Law
- French
- French for International Trade
- General Fine Arts
- Geography (Tracks available: Economic Geographer, Environmental Geographer, General Geography, and GIS and Cartographer)
- German
- German for International Trade
- Government and Public Service
- History
- History Pre-Law
- Journalism
- Music (Tracks: History and Literature, Music Performance, and Theory and Composition)
- Philosophy
- Philosophy Pre-Law
- Physics
- Political Science
- Political Science/International Studies
- Political Science Pre-Law
- Psychology (Applied Psychology Track available)
- Regional Planning (Tracks available: Economic Developer, Environmental Planner, GIS and Cartographer, and Town Manager)
- Religious Studies
- Sociology (Tracks available: Applied Social Research, Clinical Sociology, and General Sociology)
- Spanish
- Spanish for International Trade
- Theater



**Bachelor of Science in Education**
- Art Education
- Biology Education
- Business Education
- Chemistry Education
- Early Childhood Education
- Earth and Space Science Education
- Education of Exceptional Persons
- Education of Persons with Hearing Loss
- Elementary Education
- English Education
- Family and Consumer Sciences Education
- French Education K-12
- General Science Education
- Secondary German Education
- Health and Physical Education
- Mathematics Education
- Music Education
- Physics Education
- Social Science Education (Concentrations available: Anthropology, Sociology; Tracks available: Economics, Geography, History)
- Secondary Spanish Education
- Speech-Language Pathology and Audiology
- Vocational-Technical Education

**Bachelor of Science**
- Accounting
- Applied Mathematics
- Applied Physics
- Biochemistry
- Biology
- Business Pre-Law
- Chemistry
- Child Development/Family Relations
- Communications Media
- Computer Science (Tracks available: Applied Computer Science, Languages and Systems)
- Consumer Affairs (Community Services Track available)
- Dietetics
- Environmental Geoscience
- Environmental Health
- Fashion Merchandising
- Finance
- Food and Nutrition Science
- General Studies
- Geology
- Hotel, Restaurant, and Institutional Management
- Human Resources Management
- Interior Design/Housing
- International Business
- Management
- Management Information Systems
- Marketing
- Mathematics
- Medical Technology
- Natural Science (Tracks available: Pre-Chiropractic, Pre-Dentistry, Pre-Engineering, Pre-Optometry, Pre-Physical Therapy, and Pre-Podiatry)
- Nuclear Medicine Technology
- Nursing
- Office Systems
- Physical Education and Sport
- Physics
- Rehabilitation
- Respiratory Care
- Safety Sciences

**Bachelor of Fine Arts**
- Music Performance
- Studio

**Associate of Arts**
- Business
- General Studies

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# The University

## A University Education

As an institution of higher learning, IUP is a community of scholars of both faculty and students, committed to discover, preserve, and impart truth in all its forms. Our primary concern is with the intellectual, moral, cultural, physical, social, and aesthetic development and maturation of our students. To this end we are charged with providing a liberal education of both general and specialized studies which will allow our students to liberate themselves from narrow interests and prejudices, to broaden their intellectual horizons by increased cultural perspective, to develop the ability to think logically, critically, and creatively, and to communicate their judgments clearly and forcefully. The curriculum involves a body of knowledge about the universe and about people, their nature, behavior, and values. It also provides an opportunity to gain specialized knowledge as a preparation for graduate study and entry into professional life. Beyond this breadth and depth of knowledge, the university recognizes that such an education is only a beginning and hopes to stimulate its students to pursue continuous development in the areas of human knowledge, to seek wisdom, to challenge the mysteries of life and examine its ultimate meaning, and to become useful members of society by embracing careers which will touch the whole community.

*Approved by the University Senate in May, 1979.*

## History of the University

IUP has witnessed a history rich in accomplishment. Since 1875, when it served only 225 students in a single building, it has experienced continuous growth, becoming Pennsylvania's fifth largest university. The current enrollment is over thirteen thousand, with students from thirty-six states and over fifty-five countries.

The first building, named John Sutton Hall in honor of the first president of the Board of Trustees, was opened for students on May 17, 1875.

In April, 1920, control and ownership of the school passed to the Commonwealth of Pennsylvania. In May, 1927, by authority of the General Assembly, the State Normal School became a college, with the right to grant degrees. The name was then changed to the State Teachers College at Indiana, Pennsylvania. In 1959, the legislature approved a change of name to Indiana State College; in the 1960s there followed a rapid growth in the liberal arts program.

In December, 1965, Indiana was redesignated Indiana University of Pennsylvania and given the authority to expand its curriculum and to grant degrees at the master's level. At this time the first doctoral program was initiated.

The following publications have all recognized IUP for its high academic standards and competitive costs: *Arco's Dollarwise Guide to American Colleges*; *Barron's 300: Best Buys in College Education*; *The Best Buys in College Education* by Edward Fiske, education editor of the *New York Times*; *Changing Times*; *How to Get an Ivy League Education at a State University* by Martin Nemko; *Money* magazine's *Money Guide*; *Two Hundred Most Selective Colleges: The Definitive Guide to America's First-Choice Schools*; and *U.S. News and World Report*.

## Accreditation

IUP is a state-owned institution for higher education and a member of the State System of Higher Education. It is an approved and fully accredited member of the Middle States Association of Colleges and Schools, the National Council for Accreditation of Teacher Education, the American Home Economics Association, the American Chemical Society, the American Psychological Association, the National League for Nursing, the American Society of Safety Engineers, the Committee on Allied Health Education and Accreditation, the National Association of Schools of Music, the National Association of School Psychologists, the National Accrediting Agency for Clinical Sciences, and the Council on Hotel, Restaurant, and Institutional Education.

## Buildings and Grounds

With the addition in 1995 of 137 acres of undeveloped land from the former Campbell and County farms, the main campus, originally consisting of 12 acres and one building, is now composed of 341 acres on which are located seventy-five major buildings owned by the state and seven athletic fields. Two of the buildings, Breezedale and John Sutton Hall, have been entered in the National Register of Historic Places. The Co-op Recreational Park, located a few miles from the campus, consists of 280 acres and several buildings including a lodge and ski hut. The wooded hillsides offer opportunities for nature study and such outdoor recreational activities as hiking, skiing, and exercise trails.

## Institute for Research and Community Service

In September, 1989, the Institute for Research and Community Service was created within the Research Division of the Graduate School to replace the Center for Community Affairs and the Institute for Applied Research and Public Policy Studies.

The Institute for Research and Community Service serves as the primary outreach office of the university to link community effort and need with the diverse resources of the university and to encourage research activities among the faculty. Major areas of responsibility include: 1) To expand economic development and public service initiatives within the university's research mission; 2) To provide a coordinating function for all IUP research centers; and 3) To provide leadership and support for the Applied Research Lab and other affiliate programs.

A wide variety of services are offered through outreach efforts to community leaders in government, business, education, human service, and health care agencies and organizations. Typical services include policy analysis for local governments, needs assessments, survey research, computer projects, proposal and project development, and archaeological services, including Phase I and II surveys. Through affiliation with the IUP Data Center, a variety of specialized census and economic data reports are developed upon request.

Staff of the institute includes a director, fiscal assistant, graduate assistant, undergraduate students, and faculty associates.

## The Foundation for IUP

Incorporated in 1967, the Foundation for IUP is a nonprofit agency whose mission is two-fold—first, the Foundation acts as the repository for all private financial support that is raised for the university and has the fiduciary and legal responsibilities for the management, investment, and disbursement of these funds and for the conduct of the organization's affairs. Second, in collaboration with the university development staff, the Foundation for IUP helps to raise private financial support from alumni, parents, friends, corporations, foundations, faculty, and staff for university needs, priorities, and programs such as scholarships/student aid, technology, faculty support, library support, programs, department support, capital projects, endowment, athletic support, and unrestricted support.

The Foundation is governed by a twenty-four-member Board of Directors who represent four categories of constituencies—trustees, alumni, faculty sponsors, and ex-officio members. As part of the Institutional Advancement Division, the Foundation works closely with the Institutional Advancement staff, the vice president for Institutional Advancement, and the president of IUP.

## Information Systems and Communications Center

The Information Systems and Communications Center (ISCC), established in 1963, is located on the ground floor of Stright Hall. The ISCC provides computational support for undergraduate and graduate courses, faculty and student research, and the administrative requirements of the university.

The primary computing capacity of the center is provided by a DEC Open VMS cluster which supports both timesharing and batch processing services. A campus network provides 9.6K and 28.8K baud terminal access with Ethernet connectivity available in most locations. IUP is connected to the Internet via the SSHEnet.

Student access to computing is provided, for the most part, through the public computing laboratories. The primary public labs are strategically placed around campus to maximize their availability and impact. Several departments maintain computing facilities that are of a focused nature and which are intended to support specific programs.

Through implementation of its strategic computing plan, which is part of the university long-range planning process, the university is committed to providing the level of computing and information technology necessary for a modern institution of higher education. Guidance in this area is provided by both an Academic Computing Advisory Committee and an Administrative Computing Oversight Committee. Undergraduate and graduate students are represented on the Academic Computing Advisory Committee.

## Library and Media Services

Patrick J. Stapleton, Jr., Library, the central library for IUP, was completed and dedicated in 1981. It adjoins Rhodes R. Stabley Library, which results in a combined structure of 156,000 square feet. The Cogswell Music Library, the University School Library, and the branch campus libraries in Kittanning and in Punxsutawney are the other components of the IUP library system. Nineteen library faculty members, twenty-two support and technical staff members, and over two hundred students are employed in the Libraries and Media Resources Division of the university. The book collection contains in excess of 700,000 volumes; there are 4,500 periodical subscriptions, 1.7 million items of microforms, over 100,000 bound periodicals, and in excess of 24,000 volumes of governmental publications. (IUP is a designated Select Depository for federal and state publications.) The libraries' media holdings in all formats are extensive. Resources are supplemented through membership in OCLC for interlibrary loan, the Health Sciences Consortium (North Carolina), and the Laurel Highlands Consortium and associate membership in the Center for Research Libraries. The central library is open 93 hours a week during regular terms. The Cogswell Music Library, located on the top floor of Cogswell Hall, contains approximately 6,000 books, 70,000 scores, and 10,000 recordings. Holdings of monumental editions are substantial. Sound recordings circulate only to faculty, but listening stations are available for use by all patrons. The University School Library's 6,500 volumes support the curriculum of grades K-6 at the University School. The Armstrong County Campus library has more than 22,000 volumes, and the recently renovated Punxsutawney library contains more than 13,000 books as well as 150 periodicals and recordings of music, poetry, and drama.

## University Senate

### Purpose

The purpose of the University Senate is to provide a formal means through which the student body, faculty, and administration, working as a unified group, shall have a representative share in the governance of the university.

Nothing relating to the organization and administration of the University Senate shall be construed so as to limit the authority of the Council of Trustees or the president of the university with respect to the administration of the university as prescribed by law.

### Composition and Elective Procedures

The University Senate shall consist of a number of faculty double the number of departments of the university, an administrative segment one-third the size of the faculty segment, and a student segment one-half the size of the faculty segment. The Senate shall also include one Alumni Association representative and four representatives from staff. Faculty, administrative, and staff members must hold full-time contracts at the time of election or appointment, and students must be full-time and in good standing. "Student" refers to both the undergraduate and graduate student bodies. The student segment shall consist of ten times as many undergraduate students as graduate students, each delegation to be elected by its representative student body. Undergraduate students shall be elected under the auspices of the recognized student association (as defined by Pennsylvania state Act 1982-188) and graduate students through elections arranged by their comparable body. In both cases, the officiating body shall call for and accept voluntary nominations for election to the Senate. Student members of the University Senate serve on most of the Senate committees.

## Interim University Policy on Sexual Harassment

IUP affirms that sexual harassment is a violation of basic human rights, inconsistent with the purpose and principles of an academic community. **Sexual harassment of students and employees is unacceptable conduct and will not be tolerated.**

Any university community member who engages in sexual harassment is subject to the disciplinary process appropriate to his/her classification as an employee or student.

The right to confidentiality of all parties involved in a sexual harassment complaint shall be strictly adhered to insofar as it does not interfere with the university's legal obligation to investigate allegations of misconduct and to take appropriate corrective action.

IUP prohibits retaliatory action against individuals filing either informal or formal complaints of sexual harassment. Nothing contained in this policy protects an individual who maliciously makes false accusations. While seeking to protect those whose dignity might be compromised, it must be emphasized that false accusations of sexual harassment will not be tolerated.

Definition: Sexual harassment is a form of sex discrimination that is reprehensible and unlawful. Title IX of the education amendments of 1972 prohibits sex discrimination in employment. Sexual harassment is defined as:

**a.** making unwelcome sexual advances
**b.** requesting sexual favors
**c.** verbal or physical conduct of a sexual nature—whereby submission to such conduct is made, either explicitly or implicitly, a term or condition of a person's employment or education
**d.** verbal or physical conduct of a sexual nature—which has the purpose or effect of unreasonably interfering with an individual's academic, personal, or professional performance
**e.** verbal or physical conduct of a sexual nature—which has the purpose or effect of unreasonably creating an intimidating, hostile, or offensive educational, social, or work environment
**f.** basing employment or academic decisions upon a person's submission to or rejection of verbal or physical conduct of a sexual nature

Sexual harassment occurs in a variety of situations. Many of these situations have two circumstances in common:

— the inappropriate introduction of sexual activities into relationships of unequal power
— an element of coercion—so that compliance with requests for sexual favors becomes a criterion for granting employment or academic benefits.

Sexual harassment may also involve relationships among equals. In these cases, repeated sexual advances or demeaning verbal behavior have a harmful effect on one's ability to study, live, or work within the academic community.

*Questions regarding the Sexual Harassment Policy or complaint procedures may be directed to the Director of Human Resources, G-30 Sutton Hall, IUP. Policy approved by University Senate, May 1, 1990; pending final approval by Council of Trustees.*

# The Branch Campuses

**Frederick Sehring,**
Director, Armstrong Branch
**Valarie J. Mancuso,**
Director, Punxsutawney Branch

IUP operates two branch campuses, one in Punxsutawney, twenty-eight miles north of the Indiana campus, and one in Kittanning, twenty-eight miles west of the Indiana campus. The first branch campus was established in 1962 in Punxsutawney. The following year the Armstrong campus in Kittanning was opened. The Punxsutawney campus accommodates 200-225 students, and the Armstrong campus accommodates 300-350 students.

Control of the branch campuses is directly vested with the IUP administration and Council of Trustees. Advisory boards from the respective areas identify local needs. Both branch campuses carry full accreditation as integral parts of the undergraduate programs of IUP. This means that courses offered at the branch campuses are of the same quality as those offered at the Indiana campus.

## Programs of Study

The branch campuses of IUP offer basic Liberal Studies courses for most majors in the various undergraduate colleges of the university. Students may schedule a full program for the freshman year and some sophomore-level courses. No student accepted at either of the branch campuses is eligible for transfer to the Indiana campus until he/she has completed two semesters.

Faculty advisors and administrators at the branch campuses are available to advise students on their instructional programs and the proper time for continuing at the Indiana campus.

## Admission

Any prospective student who wishes to attend either of the branch campuses instead of the Indiana campus may apply for admission by requesting an application from the Admissions Office or from the director of either branch campus. The mailing addresses for the respective branch campuses follow:

**Armstrong County Branch Campus**
IUP
Kittanning, PA 16201

**Punxsutawney Branch Campus**
IUP
Punxsutawney, PA 15767

## Fees

Branch campus students pay the same basic fees as Indiana campus students except for the health fee.

## Food Service

Each branch campus has its own dining hall within the residence hall. Meals are served seven days a week during the time the university is in session. Residence hall students as well as students living in private homes and apartments may make arrangements to take meals in the dining halls. The dining service is operated by the same food service contractor as on the Indiana campus.

## Housing

The Punxsutawney Campus has privately owned residence halls for students living beyond commuting distance, while the Armstrong County Campus operates university-owned residence halls. Students are free to choose their housing from all available sources, which include the residence halls and private homes or apartments in the community. A list of rooms and apartments is available in each campus director's office.

## Rules and Regulations Concerning Student Behavior

Students at the branch campuses are subject to the same rules and regulations as students on the Indiana campus.

## Continuing Education

The School of Continuing Education plays a significant role in programming Community-University Studies classes (noncredit), academic workshops, and institutes in the Punxsutawney and Kittanning areas. The school is also responsive to the needs of the local community through credit and noncredit activities.

# Admissions and Registration

## Undergraduate Admissions Policy

Graduates of an accredited four-year high school or holders of a GED equivalency diploma are qualified to apply for admission to IUP. Students who have completed the junior year of high school may file an application any time after July 1.

**Requests for applications and catalogs should be addressed to**

Office of Admissions
Indiana University of Pennsylvania
216 Pratt Hall
Indiana, PA 15705

1-800-442-6830 or 412-357-2230

The Admissions Committee, giving equal opportunity to all students, will take the following criteria into consideration when reviewing each application: SAT or ACT scores, class rank, grades, high school counselor recommendations, faculty recommendations, extracurricular activities, and other pertinent information that would be helpful to the Admissions Committee in making decisions. SAT or ACT scores are not required for transfers, veterans, or applicants who have graduated from high school more than five years before applying. However, high school and all previous college transcripts are required of all applicants.

Although the university does not require a specific number of high school credits in particular subject areas, applicants are strongly urged to take the usual college preparatory program in high school. Applicants should also take any available high school courses in the field of their intended major. Certain majors at IUP require completion of a foreign language at the intermediate level in order to earn a bachelor's degree. The Admissions Committee does not require an applicant to take a foreign language in high school for admission to these majors.

Applications are considered by the Admissions Committee on a rolling basis. Under a rolling admissions policy, applications are reviewed as they become complete. Decisions can range from automatic acceptance, to request for additional information, to other alternatives, with a May 1 deadline for tuition deposits.

Academically qualified applicants to the departments of Art, Music, and Theater will be admitted to the university by the Admissions Committee. However, admission to the requested major will be subject to the acceptance by the Department of Art after a portfolio review and by the departments of Music and Theater after an audition. Students will receive information from the Art, Music, and Theater departments concerning auditions and portfolio reviews once they have been accepted to IUP.

## Freshman Applications

Applications for admission will be available after July 1 following the student's junior year of high school.

All persons expecting to apply for freshman admission to IUP should plan to take the SAT or ACT test during their junior and/or early part of their senior year. The Admissions Committee recommends that students take the tests more than once. The committee considers the highest scores from all tests taken.

Arrangements to take the SAT or ACT tests can be made through the high school principal or counselor, or by writing to the College Entrance Examination Board, Box 592, Princeton, NJ 08540 or American College Testing, P.O. Box 168, Iowa City, Iowa, 52243 for an information pamphlet and a test registration form.

In order for the test scores to be received by IUP, the applicant should designate IUP on the test registration form as one of the universities to receive the scores, or the applicant can request that their school counselor forward test scores to the Admissions Office.

The applicant should give the completed application form and the nonrefundable $30 application fee payable to IUP to his/her high school counselor or principal. The counselor or principal should mail the application and complete packet of admissions materials to the IUP Office of Admissions, 216 Pratt Hall. Indiana, PA 15705.

### Early Admission

The Early Admissions Program permits students to enroll as college freshmen after completing the junior year in high school. Early admission applications must originate with the student's high school counselor and principal. Admission consideration will be given to those applications which contain a statement indicating explicit approval by the high school principal. Applicants are considered on an individual basis. The university Admissions Committee will exercise

the final judgment as to university acceptance after a personal interview with the applicant. Early admission candidates are required to arrange for two separate interviews with Admissions counselors as part of the application procedure.

### Processing the Application

1. The Admissions Committee reviews, with care and understanding, each of the several thousand applications that are submitted each year.
2. Decisions on applications are made on a rolling basis.
3. Applicants who are admitted to IUP may be invited to attend a program on campus to receive general information and discuss their academic and career plans with the college dean, faculty representative of their respective major, and other advisers.
4. A $75 nonrefundable tuition deposit is due from all incoming students. This advance deposit payment will be credited toward the applicant's tuition.

## Transfer Admission

A student who has been attending another institution of higher education and wishes to transfer to IUP must submit an application, official transcripts of all postsecondary educational work, and an official high school transcript.

All admissions decisions are made on a "rolling" basis by the Admissions Committee. Under a rolling admissions policy, applications are reviewed as they become complete. Decisions can range from automatic acceptance, to request for additional information, to other alternatives.

Transfer applications (twelve or more postsecondary, college credits attempted) are reviewed on the basis of college coursework completed. Transfers are required to have at least a cumulative 2.0 grade point average on a 4.0 scale (C average) from all schools previously attended for admission to most programs. The teacher certification program requires a cumulative minimum 2.5 grade point average from all schools previously attended.

The evaluation of credits from other institutions of higher education is the responsibility of the Office of Admissions and the academic college dean who has jurisdiction over the student's desired major. Normally, courses considered for transfer are only those taken from institutions which are accredited by the six regional accrediting agencies. Each course is usually evaluated separately. The evaluation normally includes a review of the description, semester hours, and grade of each course along with the applicability of the course to the student's major at IUP. However, only credits transfer, not grade-point average. It has been the policy of the university that only courses with a "C" or higher grade will be accepted, except for two-year associate degree graduates of state-supported community colleges in Pennsylvania. No matter how many credits are transferable, the student must satisfy all of the degree requirements falling into the categories of (1) university requirements, (2) college requirements, and (3) department requirements. A fee of $30 will be charged to all incoming students who are transferring credits to IUP from other colleges and universities.

**University requirements:** Since all students are obliged to fulfill a basic program in Liberal Studies consisting of 53-58 semester credit hours and there is a reasonable degree of flexibility in the Liberal Studies requirements, the transfer evaluator and the college deans will look to this area first for applicable credits for transfer. Most introductory courses are generally equivalent.

### Transferring to the College of Education

Students who transfer from other colleges and universities to IUP and the College of Education must complete application for Step 1 of the 4-Step Process, Teacher Certification. Applicants should submit the following with their application to the university:

1. a completed application to Teacher Certification signed by the program coordinator/department chairperson of the chosen major
2. an official transcript with at least 29 semester hours of transferable credits
3. an official transcript(s) with a cumulative QPA of 2.5 or higher (cumulative QPAs are calculated using all coursework completed at all universities/colleges)
4. Acts 34/151 criminal and child abuse clearances (Pennsylvania residents) or FBI clearance (out-of-state residents)
5. evidence of a negative TB test (no more than one year old)
6. evidence of speech and hearing test clearances

Only students who have completed Step 1 of the 4-Step Process are eligible to take Core Education coursework. In some programs, students must meet these requirements to take professional courses as well. Students should consult with the department chairperson and/or program coordinator for their specific program.

Students who do not meet the cumulative GPA of 2.5 or 29-minimum-credit requirement are not eligible for admission to the College of Education. Students should reapply for admission when deficiencies have been met.

Some students may have compiled sufficient credits and coursework equivalencies to qualify for Junior Standing. When this is the case, students should submit both the application for Teacher Certification and the application for Junior Standing with the application for admission to the university. Students should direct questions to the department chairperson and/or program coordinator for the selected major.

## Residency Requirements for Awarding of Degrees

The university requires that at least forty-five credits, generally including the last thirty credits in a student's curriculum, must be earned by enrollment in courses at IUP. It should also be noted that for community college graduates a maximum of sixty credit hours are transferable to this institution for the purpose of fulfilling a specific program of study. Excess credits, if any, may be transferred but cannot be used for fulfilling the minimum requirements for the degree.

To remain in good academic standing, transfer students must meet the same quality-point average requirements as those specified for all other undergraduate students. See section entitled "Criteria Governing Continuance at IUP."

The university accepts credits associated with "D" grades only when they are part of a completed associate degree earned at a publicly owned community college in Pennsylvania. These "D" grades will be treated in the same manner as those earned at IUP. This articulation policy was adopted by the Board of State College and University Directors in 1973.

## Part-Time Study (Nondegree)

Part-time undergraduate study is available through the School of Continuing Education to any high school graduate or holder of a GED Equivalency Diploma. No SAT scores are required. **Note:** A TOEFL Score is required as part of the application for an individual whose native language is other than English. Those who are not U.S. citizens must submit a notarized copy of their current visa and I-94 card or alien resident card.

Applications are available from the Part-time Studies Program and must be submitted with documentation directly to the School of Continuing Education by August 15 for the fall semester and December 15 for the spring semester. A $30 application fee is required. Applications submitted after established dates are not guaranteed consideration.

Transfer students may also apply to the School of Continuing Education for part-time study and must submit official transcripts for all previous college work attempted. An overall 2.0 GPA is required.

A student in the Part-time Studies Program is limited to a semester enrollment of no more than eleven credits and must apply for formal admission to a degree program before thirty IUP credits have been earned. Applications for degree candidacy must be filed by the midterm point of the fall or spring semester preceding candidacy. Specific requirements for grade-point average and IUP credit vary by degree program. The minimum credit criteria to apply for consideration for degree candidacy are as follows:

| | |
|---|---|
| **High School Diploma or GED** | |
| 15 IUP Credits | 2.0 GPA |
| **Veteran (DD-214 required)** | |
| 9 IUP Credits | 2.0 GPA |
| **Transfer (with 12 or more credits)** | |
| 9 IUP Credits | 2.0 GPA |
| **Transfer (with 11 or less credits)** | |
| 15 IUP Credits | 2.0 GPA |

**Note:** A student who has applied and has been admitted by the Office of Admissions to a branch campus is not eligible to apply to the School of Continuing Education.

### Program for Visiting High School Students

IUP permits the exceptional high school student to preview university life and earn regular college credit on a limited nondegree basis. The student must have completed the sophomore year with a minimum of a "B" average and have the written support of the high school principal or guidance counselor. The parameters of the student's enrollment are defined in consultation with the appropriate high school official and are limited to

a maximum of nine credits per semester. For further information, contact the School of Continuing Education.

## Post Baccalaureate Studies (Undergraduate)

The Post-Baccalaureate Studies Program provides access to undergraduate courses to individuals who have an earned baccalaureate degree. Students may be seeking a second bachelor's degree, an additional teacher certification, or personal enrichment. Students may enroll on a full- or part-time basis based on personal preference and availability of coursework.

Applications are available from the School of Continuing Education. A completed application and official transcripts of all previous undergraduate coursework must be submitted for review by August 15 for fall semester and December 15 for spring semester. Applications not submitted by established dates are not guaranteed consideration. A $30 application fee is required. The fee is waived for graduates of IUP.

### Second Baccalaureate Degree

A student with an earned baccalaureate degree who wishes to complete the requirements for a second or subsequent bachelor's degree must make application and submit official transcripts indicating degree(s) awarded. The student must complete a minimum of thirty additional IUP credits and meet the requirements for graduation established by the academic department and college in which the new degree is to be earned. It is not possible to receive two or more baccalaureate degrees simultaneously. However, a student may complete one or more secondary majors while earning the primary degree.

### Teacher Certification

A student with an earned nonteaching baccalaureate degree who wishes to complete the requirements for Instructional Level I certification must apply as a second bachelor's degree student. A minimum cumulative grade-point average of 2.50 is required for consideration for admission. To earn Instructional Level I, the student must satisfactorily complete the prescribed courses in an IUP degree certification program at a minimum cumulative grade-point average of 2.5 and successfully pass the National Teacher Examination.

A currently Pennsylvania-certified teacher who wishes to add a new area of certification may apply to the School of Continuing Education under the category teacher certification. Individuals admitted to an additional teacher certification will follow an individually planned and approved course of study.

## Immunization Requirements

Students entering effective fall, 1991, are required to complete a Student Health Form documenting immunization status. See Health Services information in section "Student Programs and Services."

## Readmission Policy for Students Who Withdraw from the University Voluntarily

Graduate students wishing to return to the university must contact the Graduate School at (412) 357-2222 for specific instructions. School of Continuing Education students should contact the School of Continuing Education at (412) 357-2292.

All other undergraduate students who have withdrawn from the university or were not enrolled during the previous regular semester must complete an Application for Readmission, available in the Office of the Registrar, G8 Sutton Hall, or by calling (412) 357-5732. During evening or weekend hours, you may call this number and leave your name and address, and a form will be promptly mailed to you. The readmission deadline for the fall semester is July 20 and December 1 for the spring semester.

All outstanding financial obligations to the university must be met before your Application for Readmission will be processed. Due to enrollment restrictions, requests for readmission to Nursing, Music, or Art will be forwarded for approval by a representative designated by that dean or department.

Requests for readmission for academically dismissed students will be forwarded to the Office of the Dean of the college in which the student was enrolled at time of dismissal for a decision on the student's readmission.

Readmitted students who have not enrolled for two years and have petitioned their college dean under the Cancelled Semester Policy must first register and pay fees and attend classes before their designated semester will be cancelled.

Once your application for readmission has been approved, you will be sent a Time Appointment Notice by the Office of the Registrar with instructions on how to register.

As a student readmitted to IUP, you are encouraged to complete the Free Application for Federal Student Aid (FAFSA) to determine your financial aid eligibility. Your financial aid eligibility will be based on your financial need, as determined by the FAFSA, and your prior academic record.

If you have previously attended a postsecondary school or schools other than IUP, a Financial Aid Transcript must be completed by this previous school and sent to IUP.

## The Summer Sessions

The summer school program at IUP is designed to meet the needs of many students. Courses, workshops, and seminars are offered in the liberal arts, in teacher education, and in other fields of study.

Continuing university students, including newly admitted freshmen, who wish to accelerate their program of studies will find both Liberal Studies and special courses in all fields of study. Students from other colleges and universities may take courses at IUP; however, they are advised to first ensure that their home institution will transfer such credits earned at IUP.

Teachers-in-service will find courses in the summer program to serve a variety of needs. They may enroll to qualify for permanent certification, take refresher courses in their field of specialization, or take courses for the purpose of extending their certification to a new field.

The Summer Sessions Schedule is now combined with the Fall schedule. It can be obtained by contacting the Scheduling Center, Room G3, Sutton Hall (toll-free number 888-800-3190). The schedule can also be viewed on the World Wide Web at *http://www.iup.edu.schedu/*.

Attendance at summer sessions undergraduate school is open to all students but does not constitute admission or readmission for continuing registration in the fall and/or spring semesters. Students in good standing who desire admission must obtain an application through the Office of Admissions or the School of Continuing Education, as appropriate. Students who desire readmission for the fall semester must apply to the Registrar's Office by the preceding July 20 and by December 1 for the spring semester.

## American Language Institute (ALI)

The American Language Institute offers several noncredit, intensive English programs for international students and visitors from beginning through advanced levels each semester.

The English for Academic Purposes Program (EAP) is for applicants seeking to prepare themselves for study at any U.S. college or university. Enrollment in fall and spring semester is for fourteen weeks (20 hrs/wk). In summer semester, programs generally are offered for ten weeks. Students are placed at beginner, intermediate, or advanced levels by proficiency tests at the start of each program. An institutional TOEFL is administered at the conclusion of each semester.

The ALI also offers two less intensive programs: English for Specific Purposes (ESP) for graduate students entering specialized fields and English for Visitors (EV) for visiting professionals who seek improvement in English while experiencing life in the U.S. Special part-time credit programs can be arranged.

Cocurricular social and cultural programs are offered to all students.

# Finances

## Institutional Fees*

**The university reserves the right to change its fees without notice.*

The tuition and fees set forth in this section were those in effect in May, 1997. The fee schedule is subject to change; these figures are to be considered simply as an estimate. A current fee schedule may be obtained by writing to the Admissions Office, IUP, or by phoning (412) 357-2230.

### Tuition

The tuition for all full-time in-state students is $1,684 per semester. This covers registration and the keeping of student records. use of the library, student welfare, and laboratory facilities. An additional $140 per credit will be charged for undergraduate credits scheduled in excess of eighteen. The tuition for part-time in-state undergraduate students is $140 per semester hour. A part-time undergraduate student is one taking eleven or fewer semester hours. See the sections on Admissions and Registration and on University Policies for further information concerning part-time students.

Out-of-state full-time students pay tuition of $4,283 per semester. An additional $357 per credit will be charged for credits in excess of eighteen. The tuition for part-time out-of-state students is $357 per semester hour. The definition of an in-state student is based on domicile. An in-state student is one who has been domiciled in Pennsylvania for at least one year preceding attendance at any institution of higher education in the state of Pennsylvania. A minor is presumed to have the domicile of his/her parents or legal guardian. Students who have any question whatsoever concerning their domicile should read the official text of the rules, as published in Volume 22, Pennsylvania Code, Section 507.1 through 507.11.

### Audit Fee

Full standard fees will be assessed for each course audited, exception being persons on Social Security or equivalent retirement benefit, who will be given remission of basic fees for such classes where space is available.

### Bad Check Charge

Students making checks payable to "Indiana University of Pennsylvania" which are not acceptable to the bank for any reason will be charged $10 for each bad check in the amount of $.01 to $49.99 and $20 for bad checks written for $50 or more.

### Dining Plan Fee

The semester fees for dining plans, effective June, 1997, are:

| | |
|---|---|
| **Plan A**—Unlimited access to Foster and Folger only | $728 |
| **Plan B**—19 meals a week + $50 in Flex money | $715 |
| **Plan C**—19 meals a week | $665 |
| **Plan D**—Any 240 meals a semester | $692 |
| **Plan E**—Any 14 meals a week + $100 in Flex money | $729 |
| **Plan F**—Any 14 meals a week | $629 |
| **Plan G**—Any 165 meals a semester | $598 |
| **Plan H**—Any 10 meals a week + $100 in Flex money | $652 |
| **Plan I**—Any 10 meals a week | $552 |
| **Plan J**—Any 75 meals a semester | $359 |
| **Plan K**—Any 5 meals a week + $100 in Flex money | $464 |
| **Plan L**—Any 5 meals a week | $364 |

Flex money can be carried from fall to spring semester; however, any portion not used by the end of the spring semester will be forfeited. Flex may be used for guests.

### Educational Services Fee

All students are charged a fee to support academic equipment and library resources. For full-time students the fee is $75 per semester; for part-time students the fee is $35 per semester, and all students are charged $35 per summer session.

### Facilities Fee

All students are charged a fee to support maintenance and repair projects, recreational facilities, and the advancement of technologies. For full-time students the fee is $93 per semester; for part-time students, the fee is $43 per semester, and all students are charged $43 per summer session.

### Financial Delinquency Policy

Registration is not in fact complete until a student pays the fee for such registration and the university reserves for itself the right to bar a nonpaying student from classes. When it has been determined during the course of a semester that a student's account has become delinquent from accrued charges, the Registrar's Office will

be notified of this delinquency and advised to refrain from reporting the student's grades and from issuing any transcripts for that student's work until the delinquent account has been satisfied. Faculty members will continue to submit a grade for the financially delinquent student; however, requests from students will not be honored, and official reports will be released by the Registrar's Office only after the student has cleared his or her account or has established a payment plan satisfactory to the Accounts Receivable Office.

### Health Fee

IUP offers two student health fee plans. Plan A - $68 offers all services including starter doses and over-the-counter medications. Plan B - $78 offers all services including all medications. The student health fee is assessed for each full-time undergraduate or graduate student at the Indiana campus. All new students will automatically be enrolled in Plan B and should indicate their preference for Plan A by completing and returning a card which will be sent with the Prematriculation Immunization Requirements information. Part-time undergraduate students taking six to eleven credit hours will be assessed $34 - Plan A and $39 - Plan B per semester health service fee. Undergraduate students taking less than six credits have the option of paying the per semester fee or they may choose the Fee-for-Service schedule available at the IUP Health Center. The fee may be exempted for students living more than sixty miles from campus or on internship at a site more than thirty miles from campus. Students attending branch campuses have health fee options and should contact their branch campus director or the IUP Health Center. For further information on health fees, contact the University Health Service at (412) 357-6475.

### Late Registration Fee

Students who desire to register on the day prior to the start of classes, designated by the university as the Late Registration Day, will be assessed a Late Registration Fee of $50. Students who register for classes after completion of the university's Late Registration Day will be assessed a Late Registration Fee of $100. Exceptions to this fee may be granted by the provost or designee for students admitted late to the university for reasons deemed appropriate by the provost.

### Med-Tech Students

During the clinical year a fee may be levied and collected by the participating hospital. The only other cost to these students shall be an administrative fee of $150 to be collected by the university. Room and board shall be the responsibility of the student.

### Military Science Fee

An activity fee of $5 is required for ROTC cadets to cover the cost of Cadet Corps functions. This fee is payable directly to the military science department.

### Miscellaneous Costs

In some courses students are required to obtain supplies and materials to complete course projects. In many courses, a student may make a voluntary contribution to a cooperative fund established for the purpose of obtaining these supplies and/or services at a lower cost. Examples are art courses, field trips, etc.

### Residence Hall Fee

The 1997-98 academic year room fees for residence hall students are $976 a semester for a double-occupancy room and $1,470 for single rooms. Resident students are required to have a dining plan and can select from plans A through H *(see Dining fees)*.

### Student Activity Fee

An activity fee is collected from all students and administered through the Student Cooperative Association under regulations approved by the Council of Trustees. This fee of $112 per semester covers the cost of student activities in athletics, lectures, entertainment, student publications, etc., and is payable in one sum for the semester. The Student Activity Fee is $46 for part-time students. These fees apply to Indiana campus students only. Students attending the Armstrong or Punxsutawney campuses pay $107.50 per semester full-time and $41.50 part-time. (These fees are subject to change without notice during the academic year.)

### Students Studying Abroad

Students enrolled in the studies abroad program will pay a program fee per semester to the university. All other fees assessed by the foreign institution will be paid directly to the foreign institution by the student.

### Testing Fee

Each entering freshman must participate in placement testing during the summer immediately preceding the student's matriculation on campus. A fee of $75 is assessed for this overnight, two-day experience for students admitted to the Indiana campus. Parents pay a nominal fee for their participation in the accompanying parent orientation program. Branch campus students participate in a summer one-day diagnostic testing experience only with a fee of $45. Students receive information about the summer testing program prior to the testing date(s). Fees are included in the regular billing and are nonrefundable. Please see the catalog section on Orientation for further information about the Summer Orientation: Preregistration Placement Testing, Advising, and Course Selections Program.

## Summer Sessions Fees

### Basic Fee

The basic fee for in-state undergraduate students enrolled for any of the regular summer sessions is $140 per semester hour. The basic fee for out-of-state undergraduate students is $357 per semester hour.

### Dining Plan Fees

The five-week session dining plan fees for summer, 1997, are:

| | |
|---|---|
| **Plan A**—Unlimited access to Foster Hall | $229 |
| **Plan C**—19 meals a week | $209 |
| **Plan D**—Any 75 meals a session | $218 |
| **Plan F**—Any 14 meals a week | $197 |
| **Plan G**—Any 52 meals a session | $187 |
| **Plan I**—Any 10 meals a week | $174 |
| **Plan J**—Any 24 meals a session | $113 |
| **Plan L**—Any 5 meals week | $114 |

### Residence Hall Fee

The 1997 summer residence hall fees are $66 a week for a double-occupancy room and $98 a week for a single room. Students are charged for each session according to the number of weeks they will require housing. Resident students can select from dining plans A, C, D, F, or G.

### Student Activity Fee

For each of the two summer sessions, this fee is $37.50.

### Student Health Fee

Each undergraduate and graduate student enrolled in IUP summer sessions will be assessed $25 for each session for Student Health Services.

## Special Fees

### Damage Fee

Students are responsible for damages, breakage, loss, or delayed return of university property.

### Degree Fee

A fee of $30 will be charged each candidate for a degree at the time of approval of application for graduation. This fee is to cover costs of preparing diplomas and the graduation ceremony.

### Estimated Expenses Per Semester

| | In-State | Out-of-State |
|---|---|---|
| Instructional Fee | $1,684 | $4.283 |
| Housing | 976 | 976 |
| Meals | 728 | 728 |
| Student Activity Fee | 112 | 112 |
| Health Fee | 78 | 78 |
| Educational Service Fee | 75 | 75 |
| Facilities Fee | 93 | 93 |
| Books and Supplies* | 500 | 500 |
| | $4,246 | $6,845 |

Miscellaneous and travel expenses would be in addition to the above.

*Cost of books and supplies may vary depending on major and class enrollment.

### Transcript Fees

Applications for transcripts must be made only in writing to the registrar, either by U.S. mail or on forms available at the Registrar's Office in G-S Sutton Hall. Such requests must include

1. Your full name and Social Security number as of your graduation or termination of enrollment at IUP. (Please note any name changes since graduation.)
2. Your present address.
3. Whether you graduated or, if not, when you were enrolled.
4. The full and clearly stated name(s) and address(es) of person(s) to whom you wish the transcript(s) sent.

A transcript fee is charged for each copy requested. (Checks or money orders should be made out to Indiana University of Pennsylvania.) An additional charge will be assessed for express transcript service. Please call 412-357-2217 for current transcript fee information.

Any requests which are not accompanied by the proper fees or information will be returned to the sender for inclusion of them. No transcript requests will be processed without the payment of transcript fees.

Official transcripts (containing signature and university seal) will not be issued to students directly. The university will attempt to mail official transcripts within a reasonable time. However, in the event of its failure to do so, damages will be limited to the fee, if any, paid by the student for the copy or copies of the transcript. In no case is the university responsible for consequential damages.

## Billing and Payments

All bills, including basic fee and housing fee, are payable as specified on the billing notice; students have several payment plan options. Checks or money orders, in the exact amount of the billing notice, should be made payable to IUP unless otherwise specified. Book Store purchases are on a cash basis.

It is desired that payments for the entire semester be made in August for the first semester and in December for the second semester; however, for a nominal charge an installment plan is available.

## Delinquent Accounts

Students will not be permitted to enroll for any semester nor to graduate until all bills previously incurred have been paid; nor will credit be certified to any other institution or the Department of Education until all overdue accounts have been paid. A late payment fee of $10 for each day past the due date will be assessed for delinquent accounts up to a maximum of $50.

Undergraduate students desiring to leave school before the close of a semester must report to the Advising and Testing Center and to the Accounts Receivable Office to settle all unpaid accounts.

## IUP Refund Policy

The university employs faculty, assigns residence hall space, and arranges for dining contracts in advance of each term based on the number of students who plan to enroll. A student who withdraws from the university creates vacancies that may not be filled and incurs obligations for compensation and services that must be honored.

The refund policy at Indiana University of Pennsylvania applies to all students enrolled in programs for credit at the university, its branches, the Regional Police Academy, and the Academy of Culinary Arts, both full time and part time. A student canceling or withdrawing from his/her first semester session should refer to section IIC.

### I. Cancellation before Beginning of Current Semester

Students registered and/or prepaid who decide not to attend for a semester are considered canceled: if the decision is made by the first day of classes, the student is subject to the following:

A student who has made prepayments but is unable to attend classes, and who so notifies IUP by the first day of classes, is entitled to a full refund of all fees paid, less applicable advance deposits. To be eligible for such a refund, a student who cancels before the first day of classes must notify the Director of Accounts Receivable in writing. The director will forward to the Registrar's Office a listing of the cancellation notice, and the registrar will cancel the student's registration and notify the appropriate university offices. A student who cancels on the first day of classes must notify the Advising and Testing Center, Pratt Hall, in writing. A student who uses university residence halls and/or dining services the week prior to the start of classes and then cancels will forfeit an amount equal to one week's fee for such services, plus the full amount of any advance deposit payment.

### II. Withdrawal from the Current Semester

A student who registers for classes and then decides to withdraw from the current term after the first day of classes must do so through the Advising and Testing Center (undergraduate) or the Graduate School and Research Office (graduate). Dropping courses via Telreg or Termreg does not establish official withdrawal from the university. A student who withdraws is subject to the following:

A. An undergraduate student who withdraws from the university must process the withdrawal request through the Advising and Testing Center, Pratt Hall. Graduate students must withdraw through the Graduate School and Research Office, Stright Hall. The official withdrawal date will be established by such offices. Advance deposits toward housing and tuition are not refundable.

B. A returning student who has been approved to withdraw from courses will forfeit a portion of the semester fees in accordance with the following schedule:

| Withdrawal on Weekly Basis | Percentage of Student's Total Semester Fees to Be Forfeited |
|---|---|
| First through second weeks | 10% |
| Third through fourth weeks | 50% |
| Fifth through eighth weeks | 75% |
| After eighth week | No reduction |

A student attending his/her first semester will be entitled to a reduction in fees to be forfeited as outlined in Section IIC.

Refunds for students receiving financial assistance from scholarships, loans, and/or grants will be returned to the source of aid in accordance with the provisions prescribed by the funding source.

C. A first-semester student who cancels his/her schedule by the first day of classes is entitled to a 100 percent refund of fees, less the applicable advance deposits.

A student who is approved to withdraw after the first day of classes will forfeit a portion of the semester fees in accordance with the following schedule:

| Time of Withdrawal | Percentage of Student's Total Semester Fees To Be Forfeited |
|---|---|
| First week | 10% |
| Second week | 10% |
| Third week | 20% |
| Fourth week | 30% |
| Fifth week | 40% |
| Sixth week | 40% |
| Seventh week | 50% |
| Eighth week | 60% |
| Ninth week | 60% |
| Tenth week | No reduction |

A student will be charged a full week of fees for any partial week of enrollment. Advance deposit payments are not refundable.

C. During summer sessions, students approved to withdraw from the university will forfeit a portion of the total fees in accordance with the following schedule:

| Time of Withdrawal | Percentage of Student's Total Session Fees To Be Forfeited |
|---|---|
| First week | 20% |
| Second week | 40% |
| Third week | 60% |
| Fourth week and beyond | No reduction |

D. The Provost's Office will determine the official start of classes for each semester. A student enrolled in credit-bearing summer conferences, institutes, workshops, or tours of less than five-week's duration will be granted a 50-percent refund through the third day of the class (unless a no-refund policy is required by the sponsor).

E. A student who withdraws from the university must follow procedures for readmission if he/she chooses to return.

### III. Individual Course Reduction

An Individual Course Reduction is a reduction in class load, including all courses in a given semester, but not total withdrawal from the university. Example: a student who registers for three courses and then withdraws/drops one or two classes but continues with the other class or classes. Individual course reductions are limited to five withdrawals during a student's academic career at IUP. Courses "dropped" during the official drop/add period are not considered to be an individual course withdrawal.

No fees will be charged to a student who drops a course(s) by the first day of classes. No reduction in fees will be made to full-time students who reduce their credit load after the first day of classes. Part-time students who reduce their credit load after the first day of classes and thereafter will receive a reduction in part-time fees in accordance with the following schedule:

| Withdrawal on a Weekly Basis | Percentage of Student's Fees to Be Forfeited |
|---|---|
| First through second weeks | 10% |
| Third through fourth weeks | 50% |
| Fifth through eighth weeks | 75% |
| After eighth week | No reduction |

Students should familiarize themselves with the financial aid penalties related to individual course reduction. No reduction will be granted to students who drop and add like number of credit hours. Reductions will be granted to students for individual course withdrawals during the summer session under the same basis as outlined under section IID. During fall and spring semesters, students totally withdrawing from the university should refer to section II, A-C.

### IV. Termination of Residence Hall or Dining Service Contracts

A. **Academic Year** (Fall and Spring Semesters)

1. **Residence Hall Termination:** Release from a Residence Hall Contract is not granted except under the conditions outlined in the Residence Hall contract. Any student who submits a written request to Housing and Residence Life and meets the conditions for release through the first day of classes will be assessed no forfeiture and will receive a 100-percent reduction of the room fee, less the applicable advance deposit. Requests granted after the first day of classes will result in a forfeiture as outlined under section 2.

**Dining Service Termination:** Any student who requests in writing and is released from his/her Dining Service Contract by Housing and Residence Life. through the first day of classes. will be assessed no forfeiture, and the student will receive a 100-percent reduction of dining service fees. A student who requests in writing to terminate his/her university Dining Service Agreement, after the first day of classes, and is granted a contract release will forfeit a portion of the semester fees according to the following schedule:

| Date of Termination from Contract | Percentage of Semester Fee To Be Forfeited |
|---|---|
| First through second weeks | 10% |
| Third through fourth weeks | 50% |
| Fifth through eighth weeks | 75% |
| After the eighth week | No reduction |

Cancellation of session block plans will result in forfeiture of the fees in the manner identified above or of fees equal to the actual meals eaten, whichever is greater.

**Summer Sessions:** Once a student applies for and receives a housing and/or dining service assignment, he/she must request in writing and obtain a release of that assignment from Housing and Residence Life in order to be eligible for a reduction of fees in accordance with the following schedule:

| Date of Termination Residence Hall Dining Contract | Percentage of Session Fees To Be Forfeited |
|---|---|
| Check-in* through the first week | 20% |
| Second week | 40% |
| Third week | 60% |
| Fourth week and beyond | No reduction |

Cancellation of session block plans will result in forfeiture of the fees in the manner identified above or of fees equal to the actual meals eaten, whichever is greater.

*The Office of Housing and Residence Life will publish the date students are to check into the residence halls for each summer session. The check-in date is the effective date of the student's contract.

### V. Other Provisions

Formal withdrawal procedures must be initiated through the Advising and Testing Center (undergraduates) or the Graduate School and Research Office (graduates) at the point of withdrawal. A written and dated notice is required by the student or student's family in special circumstances, such as sickness, within thirty days of the student's withdrawal. In order to receive a reduction in fees for individual course withdrawal, documentation must be submitted to the Student Accounts Receivable Office prior to the close of the semester/session in which the course was offered.

Students who are suspended from classes, residence halls, and/or dining service will receive a reduction of fees in accordance with the schedule as outlined under sections II and IV.

The Advising and Testing Center (for undergraduate students) and the Graduate School and Research Office (for graduate students) may request exceptions to these policies when circumstances justify it. Example: death or medical reasons.

Student Military Reservists or members of the National Guard who are ordered to active military service by the President of the United States will receive a full reduction of charges for tuition. Other fees will be prorated.

Examples of refund calculations are available upon request in the Student Accounts Receivable Office, Administrative Annex, which is responsible for implementing the refund policy. Students may to appeal the decision rendered by the Student Accounts Receivable Office to the director of Student Financial Services.

## Financial Aid

The Financial Aid Office, located at 308 Pratt Hall, offers financial information and counseling to all students attending IUP. The types of financial assistance offered by the Financial Aid Office include student employment, educational loans, and grants. Counseling on debt management and loan repayment options is also available.

### Eligibility Requirements

The general requirements for financial aid eligibility include the following:

1. Be enrolled on at least a half-time basis (six credits per term) except for the Federal Pell Grant program.
2. Be a U.S. citizen, national or permanent resident, or other eligible noncitizen.
3. Maintain satisfactory academic progress in your course of study.
4. Be enrolled or accepted for enrollment in an Associate Degree, Bachelor's Degree, Post Baccalaureate Teacher's Certification program, or Post Baccalaureate Second Undergraduate Degree program.
5. Not be in default or have failed to make satisfactory arrangements to repay any Federal Student Loans. Not owe a repayment on a Federal Pell Grant or Federal Supplemental Educational Opportunity Grant.
6. Not have borrowed in excess of any Federal Loan limits.
7. Register with the Selective Service Administration, if required.
8. Submit Financial Aid Transcripts from all other postsecondary schools you have attended.
9. Have a valid Social Security Number.

Students must complete a *Free Application for Federal Student Aid* (FAFSA) by May 1 in order to receive maximum consideration for need-based financial aid administered through the university. The Title IV school code for IUP is 003277. Additional forms or applications may be required depending upon which student aid programs are being sought. Financial aid is available for both the regular academic year and the summer sessions. Separate applications for summer school aid must be submitted by the student.

**Student Responsibilities**—Students who apply for financial aid have certain responsibilities which are listed below:

1. Accurately complete and submit the appropriate application forms by the published deadline dates.
2. Submit requested materials, corrections, or new information on a timely basis.
3. Meet the regulations and repayment schedules of student loans.

4. Inform the Financial Aid Office of any grants, scholarships, or loans received from outside organizations.
5. Inform the Financial Aid Office of any information that has changed since applying for aid.
6. Understand the satisfactory academic progress requirements for maintaining financial aid eligibility.
7. Use financial aid funds for educational purposes only.

## Financial Aid Programs Available

Financial assistance is available in the form of grants and scholarships, student employment, and educational loans. Each of these funding sources has unique characteristics which are explained in more detail below.

**Employment**—Employment programs provide an opportunity for students to earn money to help finance their educational expenses. Students may be employed at minimum wage for up to twenty hours per week when classes are in session and up to forty hours per week during vacation periods. Wages for hours worked are paid every other week directly to the student.

Students are responsible for securing their own positions on campus. A bulletin board outside of the Financial Aid Office displays known job vacancies. Also, students may call the CareerLink Student Employment Job Hotline, 412-357-2556, to hear about available positions. Students may directly contact departmental and administrative offices for job opportunities as well. However, there are generally more students seeking employment than there are jobs available. Students with work-study awards are not guaranteed that they will obtain employment.

**Federal Work-Study Program (FWSP)**—Eligibility for FWSP is based on financial need. Students must complete both the *Free Application for Federal Student Aid* (FAFSA) and an *IUP FWSP Application*.

**Community Service Program**—This employment program places FWSP-eligible students in community service positions available both on and off campus. In addition to earning money, students gain practical work experience related to their academic major. The Student Community Service Office located in 103 Pratt Hall assists students with placement.

**University Employment (UE)**—This program is similar to the Federal Work Study Program. However, students who do not demonstrate financial need may be employed. No financial aid application is necessary. Inquire directly with campus offices regarding available positions.

**PHEAA State Work Study**—Off-campus employment that relates to the student's academic major may be available through the PHEAA State Work-Study program. Applications are available in the Financial Aid Office and must be completed by both the student and the organization for which the student would like to be employed.

## Educational Loans

Loan programs offer repayable assistance to students who apply and qualify for them. Repayment terms, interest rates, and borrowing limits vary from program to program. Educational loans are a serious and important obligation. Receipt of funds means that the student assumes the legal responsibility for repayment of the loan at a future date. The promissory note for the loan specifies the terms and conditions under which the student is borrowing and the repayment provisions that are in effect. Participation in Community Service positions after leaving school may provide for repayment of certain student loans.

**Federal Perkins Loan**—The application for the Federal Perkins Loan is the *Free Application for Federal Student Aid* (FAFSA). The loan is awarded to students on the basis of financial need and FAFSA receipt date of May 1 or earlier. Students who receive this loan must be enrolled for at least six credits each semester. There are no principal or interest payments until nine months after the student ceases half-time attendance (six credits per term). The minimum repayment rate is $40 per month at a simple interest rate of 5 percent per year on the unpaid balance. There are deferment and cancellation provisions available.

**Federal Stafford Loan**—Applications for the Federal Stafford Loan are obtained from lending institutions. These include banks, savings and loan associations, credit unions, etc. A *Free Application for Federal Student Aid* (FAFSA) must also be completed.

Through this program, freshmen may borrow up to $2,625 per academic year, sophomores may borrow up to $3,500 per academic year, and juniors and seniors may borrow up to $5,500 per academic year. Subsidized Federal Stafford Loans are awarded on the basis of financial need as determined by the *Free Application for Federal Student Aid* (FAFSA) and require no payment of interest or principal until six months after the student ceases half-time enrollment (six credits per term). Unsubsidized Federal Stafford Loans require payment of interest only during periods of enrollment and the six-month grace period. Following the grace period, both types of Federal Stafford Loans are repayable to the lender at a variable interest rate not to exceed 8.25 percent.

Additional unsubsidized Federal Stafford Loan funds are available to independent undergraduate students. Freshmen and sophomores may request up to $4,000; juniors and seniors may request up to $5,000. Dependent students whose parents cannot obtain a Federal PLUS Loan may also apply for these additional unsubsidized funds.

**Federal PLUS Loan**—Federal Parent Loans for Undergraduate Students (FPLUS) are obtained from lending institutions such as banks and credit unions and are administered in conjunction with the federal government. Parents may borrow for their dependent children up to the cost of education minus other financial aid. The loans are repaid at a variable interest rate not to exceed 9 percent per year starting sixty days after the final check is issued.

## University Loan Fund

The Financial Aid Office, in conjunction with the Student Cooperative Association, administers the University Loan Fund on behalf of IUP students. Loans are only available to students who are expecting a financial aid refund that is yet to be disbursed. The maximum loan available will be $300 with repayment to be made in sixty days. No interest will be charged for these loans. Loans will be made to meet educational expenses only. Applications for the University Loan and additional information may be obtained at the Financial Aid Office.

**The University Loan Fund encompasses the following individual loan accounts:**

**Jennie E. Ackerman Loan Fund**—The Jennie E. Ackerman Loan Fund was established in 1962 in memory of Jennie E. Ackerman, who served as supervisor of student teachers at IUP for many years.

**Robert Bellis Loan Fund**—This loan fund has been established at IUP by friends and relatives of a graduate of Indiana State College.

**Mary Edna Flegal Loan Fund**—A loan fund has been established by Alpha Chapter of Delta Kappa Gamma Society International in memory of Mary Edna Flegal, who graduated from Indiana Normal School in 1899 and served as director of Art. Upperclass students enrolled in the College of Education are eligible to receive these funds.

**Colette Cromer Gershman Loan Fund**—Family and friends of Colette Cromer Gershman established this fund in memory of a family and consumer sciences education graduate. Upperclass students enrolled in the College of Health and Human Services are eligible for the loan.

**Margaret Flegal Harte Loan Fund**—The primary purpose of this fund is to aid students who are in temporary need of assistance.

**Suzanne Marshall Hartman Loan Fund**—A loan fund has been established by family and friends of Suzanne M. Hartman, a home economics graduate of IUP. This loan is granted to deserving students in their sophomore, junior, and senior years.

**John Hays Memorial Fund**—This loan fund is in memory of Dr. John Hays of IUP's educational psychology department. Dr. Hays was a faculty member at IUP for twenty-one years.

**Oliver W. Helmrich Memorial Loan Fund**—The Helmrich Memorial Loan Fund was established by family and friends in memory of an IUP faculty member. Eligibility is limited to seniors and graduate students enrolled in the College of Education.

**William Henzelmann Memorial Fund**—This loan provides assistance to junior and senior students enrolled in German or Russian in the Department of Foreign Languages. It was established in memory of William J. Henzelmann, a faculty member in German.

**Mary Anne Kolessar Loan Fund**—Established in memory of Mary Anne Kolessar, a consumer services student at IUP, the fund aids students majoring in consumer services who are in temporary need of funds.

**Jane E. Leonard Memorial Loan Fund**—The loan honors a faculty member at Indiana Normal School from 1875 to 1921.

**Mack Loan Fund**—Established by the Mack family, the fund provides assistance to worthy students with financial need.

**Rusty Preisendefer Memorial Loan Fund**—This fund was established by Suzanne Preisendefer Brickner in memory of her husband, Lt. Harold A. Preisendefer, who was killed in action in Vietnam.

**Flossie Wagner Sanford Student Loan Fund**—The Pennsylvania Federation of Women's Clubs established this loan fund in honor of a past president of the club and former member of the faculty.

**Varsity I Loan Fund**—Established by the Men's Varsity I Club, this loan is available for use by all IUP students. Preference is given to freshmen.

**Norah Zink Loan Fund**—The Zink Loan honors a former geography professor at IUP. Foreign students in their sophomore, junior, or senior year are eligible to receive these funds.

## Grants

Grants are funds which carry no obligation for repayment. These funds are awarded to the student on the basis of financial need.

**Federal Pell Grant**—The Federal Pell Grant program provides funds to eligible undergraduate students who have not earned a first bachelor's degree. A *Free Application for Federal Student Aid* (FAFSA) must be filed annually to apply for this grant. Awards are prorated based upon the number of credits for which a student registers.

**Federal Supplemental Educational Opportunity Grant**—Federal Pell Grant-eligible students are considered for Federal Supplemental Educational Opportunity Grants (FSEOG). A *Free Application for Federal Student Aid* (FAFSA) must be completed by May 1. Students who receive FSEOG must be enrolled for at least six credits each semester.

**Pennsylvania State Grant (PHEAA Grant)**—PHEAA Grants are available to eligible part-time and full-time undergraduate students who are Pennsylvania state residents. Part-time recipients must also meet specific PHEAA income guidelines. You must complete a *Free Application for Federal Student Aid* (FAFSA) by May 1 to apply. Academic progress guidelines require that a student earn twelve new credits for each semester for continued eligibility of grant funds. A maximum of eight full-time or sixteen part-time semesters of eligibility are permitted.

**State Grants**—Many state educational agencies offer grant assistance to students who study outside of their state of residency. Out-of state students are encouraged to investigate opportunities for grant funding from their home state.

## Scholarships

Departments, colleges, and the Provost's Office administer various scholarship programs that have been established by alumni and friends of the university. These scholarships serve to recognize academically talented students and assist them in financing their educational expenses. No general application is required for consideration. All eligible students are automatically considered for scholarship opportunities. Questions may be directed to the college dean or department chair of the student's intended major or current major for enrolled students.

### Eberly College of Business

Dr. Robert Camp, Dean; 412-357-2520

***Scholarships for incoming freshmen:***

**George M. Burke Memorial Fund** —A four-year scholarship awarded to a freshman enrolled in the Eberly College of Business on a full-time basis who demonstrates financial need and who is a permanent resident of Pennsylvania.

**Charles L. Cooper/Alumni Scholarships**—Consideration given to all outstanding students, regardless of year of study, enrolled in the Department of Accounting of the Eberly College of Business.

**Robert L. Hite Scholarship**—Awarded to a full-time freshman majoring in Accounting, Finance, or Management from specified counties in Pennsylvania and New York. The recipient must maintain a minimum of fifteen credits per semester.

**Fred E. Kunkle (Evergreen Motors) Scholarship**—The Kunkle scholarship supports the Foundation Distinguished Scholars program by funding an outstanding freshman entering the Eberly College of Business. The award is renewable for four years.

**Arveta DeGaetano McNaughton Scholarship**—Awarded each year to a graduate of Indiana Area Senior High School who was enrolled in the Business Department at the Indiana Area Senior High School and who enrolls in the Eberly College of Business as a full-time student.

**Carl E. Patchin Scholarship**—The Patchin scholarship supports the Foundation Distinguished Scholars program by funding an outstanding freshman who will enroll in the Eberly College of Business. The award is renewable for four years.

**Everett and Lavina Peterman Scholarship**—A four-year scholarship awarded every four years to an incoming freshman who enrolls on a full-time basis as a Business Education or Management Information Systems major who has graduated from an Indiana County high school. The recipient will be a student who has scored at least 1000 on his/her SAT and who must maintain a 3.0 QPA overall at the end of each academic year.

**S&T Bank College of Business Scholarship**—Scholarship program provides twenty awards of $1,000 each to entering freshman students enrolled in the Eberly College of Business. Recipients are selected by demonstrated academic promise and residency within the S&T Bank service area.

***Scholarships for currently enrolled students:***

**Alcoa**—This scholarship is awarded each year to a student majoring in Management Information Systems. The recipient is selected by the MIS faculty. Students in their sophomore, junior, or senior year are eligible to receive these funds.

**J. Donald Bartolomucci Scholarship**—This fund awards scholarships to upperclass students in the Eberly College of Business who are deemed worthy.

**Robert and Irene Bozzone Scholarship**—Awarded by the dean of the college to a full-time student within the college. Preference is given to students majoring in Marketing, Management, Finance, or International Business.

**Charles L. Cooper/Alumni Scholarships**—Consideration given to all outstanding students, regardless of year of study, enrolled in the Department of Accounting of the Eberly College of Business.

**Eberly Family College of Business Scholarship**— This scholarship offers assistance to undergraduate and graduate students enrolled in the Eberly College of Business. Criteria include superior academic achievement, good moral character, and financial need. Recipients selected by the university president, upon the recommendation of the Scholarship Selection Committee, shall be known as the Eberly College of Business scholars.

**Fredericks Family Scholarship**—Awarded to financially deserving and academically promising undergraduate students enrolled in the Eberly College of Business who are studying International Business and/or Finance. Recipient shall be enrolled in the Eberly College of Business and have completed their freshman year, successfully completing at least twenty-four credits and maintaining a 3.0 QPA.

**Fredericks Michael and Company Scholarship**— Awarded to provide financial support to academically promising and financially deserving undergraduate or graduate students enrolled in the Eberly College of Business who are studying International Business and/or Finance. The undergraduate students should have completed their junior year, and the graduate students should have completed their first semester and maintained a cumulative 3.0 QPA.

**Eileen Quinn Hull Memorial Scholarship**—This fund provides scholarship support to students in the ECOB who have completed at least sixty credits and maintained a 3.0 QPA in business courses and an overall 2.8 QPA. Preference is given to Business Education majors.

**Office Systems and Business Education Scholarship**—To financially assist part-time or full-time Office Systems or Business Education students who have completed at least the first semester of their junior year.

**Murray M. Varner Memorial Scholarship**—Awarded each year to one or more upperclass students from the Eberly College of Business who have completed twenty-seven or more credits and who are permanent residents of Indiana County. The recipients must be academically stable, personable, enthusiastic, and motivated in character.

## College of Education

Dr. John Butzow, Dean; 412-357-2482

***Scholarships for incoming freshmen:***

**Carol L. Moorhead Scholarship**—This is awarded to an incoming freshman student(s) enrolled in the primary, preferably early childhood, education curriculum.

**Ethel L. Morrow Memorial Scholarship**—Awarded to an entering freshman enrolled as a full-time student in the College of Education. The student must score 1000 or better on the SAT and be ranked in the top 10 percent of his/her class. The student must demonstrate good character, leadership, and promise for success. Consideration is given to students who demonstrate financial need.

**Barbara Thomas Scholarship**—Awarded to graduates of Clearfield County, Pennsylvania, high schools who enroll to study Elementary Education. Renewal of the scholarship is contingent upon recipient's maintaining a 2.5 cumulative QPA each year.

***Scholarships for currently enrolled students:***

**Jemima S. Boyd Scholarship**—This scholarship was established from the estate of Grace Noble Lacock. Each year, it is awarded by the College of Education to students who intend to teach in schools in Pennsylvania.

**Maude O. Brungard Scholarship**—Awarded to Speech-Language Pathology majors. The recipient must be a graduating senior with outstanding academic achievement who will enter IUP's master's degree program in Speech-Language Pathology. The minimum QPA required is 3.0.

**Beverly Sue Clark Memorial Scholarship**—Awarded to a junior or senior preparing for a career in teaching. Student must be a resident of Pennsylvania with preference given to residents of the following counties: Armstrong, Cambria, Indiana, Jefferson, or Westmoreland and to survivors of casualties of the 1991 Persian Gulf War.

**Mary Flegal Harte Scholarship**—Scholarships for students who have a cumulative QPA of at least 3.0 and demonstrate a financial need.

**McFarland Scholarships**—McFarland scholarships are awarded each year to honor upperclass students who have earned more than forty-five but fewer than seventy-five credits at IUP, who have QPAs of at least 3.8, and who have made special contributions to the university and community.

**Helen Wood Morris Scholarship**—The scholarship was established by Lieutenant Colonel L. M. Morris in memory of his wife, a graduate of the university. Recipients must be majoring in education and rank in the top 10 percent of their class based upon the completion of 60 credit hours of academic work.

**Dr. Russel C. Nelson Scholarship**—This scholarship is awarded each year to a talented upperclass music education major who is selected by the Music Scholarship Committee.

**Felicia G. Renck Scholarship**—This scholarship is awarded annually to a graduating senior or master's student in Early Childhood Education who has earned a 3.5 QPA.

## College of Fine Arts

Dr. Charles Cullum, Interim Dean; 412-357-2397

***Scholarships for incoming freshmen:***

**Wallis and Janet Braman Music Scholarship**—Awarded to an incoming freshman music major whose performing area is one of the following: violin, viola, cello, or double bass. Selection of grantee is made by the string area music department faculty.

**Freshman Music Scholarship**—Student must be an incoming freshman music major. Awards are based on a performance ability and equally shared among all applied studios (instruments and voice).

**Ann M. Hayward Music Scholarship**—Awarded to entering freshman vocal majors by recommendation of faculty.

**Gloria Bryan Johnson Memorial Scholarship**—Awarded to a full-time music student, to an incoming freshman, or to an upperclass cello or bass major by recommendation of faculty.

**Orval Kipp Art Scholarship**—Awarded to an incoming full-time freshman art major, SAT score of 1000 or above, and portfolio score of 20 or above. Scholarship Committee believes the student has the potential to succeed at IUP both artistically and academically. No financial consideration of need.

**Joanne P. Lovette Memorial Fund**—Awarded to an incoming freshman, contingent on continuing QPA achievement, who demonstrates outstanding artistic talent, via portfolio review, in the opinion of the Art Department Scholarship committee. Retention of this scholarship is based on maintaining an overall 2.8 QPA and a 3.0 QPA in studio/art courses.

**William P. Moorhead Scholarship**—This scholarship is awarded to a student studying organ in the Department of Music. It was established as a memorial to Mrs. William P. Moorhead.

**Organ Student Scholarship**—Awarded to a student studying organ for credit in the music department but who does not need to be a music major. Student must have a QPA of 3.25.

**Evelyn Swauger Memorial Scholarship**—Awarded to undergraduate or graduate piano majors in the Department of Music.

**Theater-by-the-Grove Freshman Talent Scholarship**—Awarded to an incoming freshman Theater major based on audition/interview for students who demonstrate promising talent or design/technical areas.

***Scholarships for currently enrolled students:***

**Anne Agnew Music Scholarship**—Awarded to music majors. Preference to piano majors, with secondary preference to any other area within the Music Department.

**Robert K. Alico, Jr., Memorial Scholarship**—The Alico Scholarship is awarded to a junior art major with a 3.2 QPA or above in the major (3.0 overall average). The student must be a permanent resident of Pennsylvania and demonstrate financial need. The recipient will have completed junior year by spring semester and demonstrate artistic talent.

**Lloyd and Libby Bastian Memorial Scholarship**—Awarded to a Theater major interested in pursuing a career in costume design and technology. The student must also demonstrate financial need.

**M. Vashti Burr Memorial Award**—A scholarship is awarded annually to a student who is deemed to be most deserving, having in mind his or her economic need and the excellence of his or her industry and scholarship. This award is given through the generosity of William V. Whittington.

**Charles A. Davis Music Endowment**—Scholarship is awarded to one or more rising sophomores enrolled in the music department and yet to complete the junior and senior years. Award will continue for two years providing that the awardee earns an overall QPA of 2.8 and a music studies QPA of at least 3.0. The awardee must exhibit outstanding musical skills in a particular musical discipline and contribute to the musical discipline and the university through ensembles, recitals, etc.

**Donald G. Eisen Scholarship**—Awarded to a Theater major who has demonstrated outstanding achievement in, commitment to, and love of the study of theater as a liberal art. Merit judged in terms of demonstrated accomplishment (including but not limited to coursework) in at least three of the following areas: dramatic literature, theater history, dramatic and theatrical theory, theater criticism, and textual analysis.

**Thomas V. Frazier Memorial Scholarship**—Scholarship awarded to a second semester junior for the senior year. The award is based on financial need and a "deep interest in theater arts." Student may be a drama student or active in off-stage roles.

**H. Eugene Hulbert Music Scholarship**—Awarded to a student majoring in either music education, music performance, or liberal arts on the basis of academic excellence, music excellence, and financial need. Completion of four semesters in the music department with a minimum of 12 credit hours each semester is required.

**Gloria Bryan Johnson Memorial Scholarship**—Awarded to a full-time music student, to an incoming freshman, or to an upperclassman cello or bass major by recommendation of faculty.

**Mary Helen Krouse MacDonald Memorial Scholarship**—Created to reward exceptionally gifted students who are majoring in Art. The scholarships are awarded to winners of the student entries in the juried art exhibitions held in the Community Arts Center of Cambria County in Johnstown, Pennsylvania. Awarded to an art student from IUP (freshman-senior) chosen by juror of the show for artistic merit.

**Benjamin T. Miller Art Scholarship**—Awarded to upper-class (not last-semester senior) Art majors who have completed twenty-nine credits, have a QPA of 3.0 or above, submit one piece of creative/scholarly work with a one-page justification of the selection, and provide one page outlining financial need.

**Mary H. Muldowney Music Scholarship**—This scholarship was funded by friends of Mary Muldowney, a long-time faculty member and choral director at IUP. It is awarded to a senior Voice major by faculty in the Department of Music.

**Organ Music Scholarship**— Preference given to undergraduate organ majors within the Department of Music; secondary preference may be given to graduate students or students enrolled in other majors. A required QPA of 3.25. Scholarship recipients must be enrolled in applied organ courses during the semesters to which the scholarship will be applied and be selected by audition performance as determined by the Organ Scholarship Selection Committee.

**Organ Student Scholarship**—Awarded to a student studying organ for credit in the music department. The student does not need to be a music major. Student must have a QPA of 3.25.

**Shelly G. Portman Memorial Scholarship**—This scholarship, established by the Portman family, will be awarded each year to juniors excelling in concert dance. Selection will be made by the faculty in the Department of Theater.

**Ralph Reynolds Memorial Scholarship**—Award recognizes talent in the areas of Art and Art Education. Student must submit portfolio, documentation, and transcripts for consideration.

**Ralph Reynolds Memorial Scholarship (Painting)**—Pennsylvania residents in the Art or Art Education major. Scholarship is awarded to one or two senior Art majors who are juniors at the time of application. Apply in the spring semester of junior year. Scholarship is awarded on the basis of artistic talent and achievement with an emphasis on painting; a portfolio is required with supportive documentation which must include current academic progress sheet and short biography. Candidates should have completed at least nine credits in painting.

**Frank Ross Memorial Scholarship**— These scholarships are awarded each year to upperclass students who are deemed worthy by the College of Fine Arts. The awards are presented in memory of a former ceramics faculty member.

**Student Art Scholarship Award**—Awarded to deserving senior IUP art students due to the efforts of the students themselves.

**Evelyn Swauger Memorial Scholarship**—Awarded to undergraduate or graduate piano majors in the Department of Music.

## College of Health and Human Services

Dr. Harold Wingard, Dean; 412-357-2555

***Scholarships for incoming freshmen:***

**LaVelle Scholarship Fund**—Awarded to an entering, full-time freshman for four consecutive years majoring in Hotel, Restaurant, and Institutional Management on the basis of financial need and scholastic ability. An SAT minimum score of 1000 is necessary; an overall QPA of 3.0, at the end of each spring semester, is required to remain eligible.

**A. Laura Mateer Scholarship**—Awarded to an entering freshman in the top 25 percent of his/her high school class who is majoring in Hotel, Restaurant, and Institutional Management. Student must maintain a 2.5 QPA to retain the scholarship.

**McDonald's/Thomas McCormick Memorial Scholarship**—Awarded to a graduate of an Indiana County high school. If student is an incoming freshman, student must be ranked in the top 25 percent of his/her graduating class and be majoring in the Department of Hotel, Restaurant, and Institutional Management. The recipient is selected by members of the department. Maintenance of the scholarship award is based on the student's maintaining a 2.75 QPA based on twenty-eight credits and obtaining a 3.0 QPA at the end of both sophomore and junior years. The student must display satisfactory progress toward a degree in HRIM.

**Susan Spurlin Peckman Memorial Scholarship**—Granted to an incoming freshman Nursing major who displays financial need and has at least a high school "B" average. Preference will be given to students from Indiana High School, Marion Center High School, or Woodland Hills High School. If no qualified entering freshman students are nominated, the award may be given to an upperclass student, enrolled in the program within the stated geographic area, who meets the initial criteria.

***Scholarships for currently enrolled students:***

**Grace J. Allman Safety Science Scholarship**—This scholarship is awarded to a senior with a minimum of a 2.75 QPA. A QPA of 3.0 is required in the following courses: SA301, 303, and 402. The student must be a senior and demonstrate academic achievement and promise for success in the safety sciences field.

**Ella C. Bendix Home Economics Loan Fund**—Awarded to worthy full-time or part-time students with financial need who are juniors, seniors, or first-year graduate students. Selection is made by the Home Economics Scholarship Committee.

**Alexa J. Boyer Emerick Scholarship**—Awarded to a deserving and outstanding full-time junior or senior (fifty-seven to ninety credits) enrolled in the nursing program with a QPA of 3.0 (minimum). The student must demonstrate participation in school and/or community activities plus a commitment to serving/assisting others.

**Eleanor Gallati Scholarship**—Awarded to deserving majors in Home Economics Education and in Child Development/Family Relations.

**William G. Gressley Memorial Scholarship**—Awarded to a student with a declared major in Hotel, Restaurant, and Institutional Management, twenty-five or more credits, and a QPA of 2.5 (minimum). Student must be an active participant in department activities.

**Hoss's Steak and Seafood House Scholarship**—The scholarship is awarded each year to students in the Hotel, Restaurant, and Institutional Management department.

**Eugene E. Lepley Memorial Scholarship**—Awarded to a junior or senior (preferably a senior) with a minimum QPA of 3.0. The student must demonstrate social responsibility by involvement in community/volunteer activities and complete a brief narrative describing future plans and aspirations relative to the general field of health and physical education. Majors in Health and Physical Education and Sport Science are considered.

**M. Jane Segar Longenecker Scholarship**—Awarded to full-time students who have achieved junior standing and have a minimum 3.5 QPA. Students must be majoring in Home Economics Education or Child Development/Family Relations.

**McDonald's/Thomas McCormick Memorial Scholarship**—Awarded to a graduate of an Indiana County high school. If student is an incoming freshman, student must be ranked in the top 25 percent of his/her graduating class and be majoring in the Department of Hotel, Restaurant, and Institutional Management. The recipient is selected by members of the department. Maintenance of the scholarship award is based on the student's maintaining a 2.75 QPA based on twenty-eight credits and obtaining a 3.0 QPA at the end of both sophomore and junior years. The student must display satisfactory progress toward a degree in HRIM.

**Marian A. Murray Scholarship**—Awarded to a graduate student in the field of Nursing. Scholarship based on academic achievement and professional involvement. Selection for the annual award shall be made by the Department of Nursing faculty.

**Ethyl V. Oxley, Opal T. Rhodes, and Helen C. Merriman Scholarship**—Awarded to students majoring in the Department of Human Development and Environmental Studies.

**Pittsburgh Home Economics Teachers Scholarship**—Awarded to an undergraduate student majoring in a program in the College of Health and Human Services who graduated from one of the Pittsburgh Public Schools. Preference given to students majoring in Home Economics Education and seniors; the award may also be given to a junior or a sophomore student enrolled in any Human Services major who is deserving both scholastically and financially.

**Ella B. Seanor Leadership in Nursing Scholarship**—Award presented to graduating senior who has successfully completed the requirements for a degree in Nursing and who has demonstrated exemplary leadership and commitment to the high standards of professional practices in nursing. (3.0 QPA required)

**Susan E. Shubra Scholarship**—Awarded to a junior or senior having at least one remaining term to be completed and a major in Consumer Affairs, Fashion Merchandising, or Interior Design/Housing within the Department of Human Development and Environmental Studies. Applicants must be of good behavior and demonstrate outstanding achievement in academics and leadership in university/community services. Consideration given to financial need.

**Student Awards—Nursing**—Awarded to undergraduate or graduate students. Criteria for awards and selection of recipients to be at the discretion of the faculty in the Department of Nursing and Allied Health Professions.

**Betty Wood Scholarship**—Awarded to a full-time student (junior standing) in Consumer Affairs. Fashion Merchandising, or Interior Design/Housing within the Department of Human Development and Environmental Studies. Student must demonstrate the highest professional manner. Minimum of 3.0 QPA. Students must be of good character and must demonstrate ontstanding achievement in academics and leadership in university/community services. Consideration given to financial need.

**Ronald and Jean Zucchelli Scholarship**—Awarded to an IUP student majoring in physical education. Preference will be given to female students.

## College of Humanities and Social Sciences

Dr. Brenda Carter, Dean; 412-357-2480

***Scholarships for currently enrolled students:***

**Mollie E. Bolling Memorial Scholarship**—Awarded to a student in the major of Sociology in the junior or senior year (at least fifty-six credits). The student must have an overall QPA of 2.0 and a major QPA of 2.5. Preference is given to African-American male students from single-parent households. If none, consideration is given to African-American females or other deserving students.

**Nancy, France Scholarship Fund**—Awarded to help students financially who want to study through the academic year, spring semester, or summer study program in Nancy, France.

**Isolde A. Henninger Award**—Award given to foreign language majors studying French, German, or Spanish. The scholarship is given to students who show great improvement in major subjects from freshman year.

**Hunt-Pickering Study Abroad Scholarship**—This scholarship makes one award to a student attending the spring semester program in Valladolid, Spain, one award to an IUP student completing the IUP-Mexico summer program in Mexico, and awards to the students in the four-week program in Costa Rica each May. Academic achievement (QPA) will be the primary criterion. In the event of similar candidates, need will he a determining factor.

**Dr. Yu-Chen Liu Memorial Endowment**—Interest earned on the endowment will be used to sponsor scholarships for Chinese-American students and their travel expenses to and from IUP from the students' point of origin. The Asian Studies Committee will make the selection of the scholarship awardee.

**Mexico Study Abroad Scholarship**—This scholarship is offered to a student participating in the Mexico Study Abroad summer program.

**Esko E. Newhill Award for Excellence**—Awarded to a junior Sociology major who shows evidence of interest in world affairs and the community and has demonstrated excellence in scholarship.

**John J. Prandy Memorial Scholarship**—This scholarship provides support to a worthy and deserving Criminology major who has achieved junior standing (fifty-six to ninety credits) and has expressed interest in pursuing a career in law enforcement. A 3.0 QPA overall is required. The recipient must also demonstrate involvement in community and/or campus activities involving children and their welfare.

**David J. Rovnan Memorial Scholarship**—Awarded to a journalism major who is an active member of the *Penn.* Student must submit a letter detailing the contributions he/she has made to the newspaper and complete an interview with the Department of Journalism Scholarship Award Committee.

**David A. Schwartz Memorial Journalism Scholarship**—This scholarship is established in memory of David Schwartz, a graduate of IUP, by his parents, the *Indiana Gazette,* and faculty and friends of IUP. The scholarship is available to outstanding students majoring in journalism.

**Gregory Spinelli Memorial Scholarship**—Awarded to students that show exceptional promise and commitment to a career in the criminal justice system.

**Study Abroad—Foreign Language Scholarship**—To provide financial scholarship to students participating in a study-abroad experience in any of the foreign language programs offered by IUP.

**Valladolid Scholarship**—To provide some financial support for expenses such as travel, tuition, or housing for students who are participating in the Valladolid Program and who are attending the University of Valladolid in Mexico.

## College of Natural Sciences and Mathematics

Dr. John Eck, Dean; 412-357-2609

***Scholarships for incoming freshmen:***

**Edward N. Brown Memorial Scholarship**—Awarded to worthy and deserving students majoring in chemistry with a good academic record that includes a high QPA in chemistry and a high overall QPA.

**Natural Sciences and Mathematics Scholarship**—Awarded to an entering freshman from an Indiana County high school who is enrolled in the College of Natural Sciences and Mathematics. A minimum SAT score of 1100 and a class rank in the top tenth are required. Renewal of scholarship is contingent on maintaining a 3.0 cumulative QPA each year.

***Scholarships for currently enrolled students:***

**Ida Z. Arms Excellence Scholarship**—Awarded to students majoring in Mathematics or Mathematics Education who have demonstrated academic excellence in their study at IUP. Grants are made primarily on the basis of overall academic achievement, including mathematics, to students who have completed at least the sophomore year (fifty-six credit hours or more) and are enrolled at IUP for the succeeding year.

**Edward N. Brown Memorial Scholarship**—Awarded to worthy and deserving students majoring in Chemistry with a good academic record that includes a high QPA in chemistry and a high overall QPA. Student must have completed at least four semesters of study at IUP, including four semesters of chemistry, and will probably be a senior, or at least a second-semester junior.

**Chairman's Scholarship Fund**—Awarded to needy students enrolled as Mathematics majors at IUP.

**Roy A. Daugherty Scholarship**—Scholarships will be given to worthy students majoring in Math Education with preference given to sons and daughters of members of Sigma Phi Epsilon fraternity who attended IUP with Mr. Daugherty.

**William Heard Memorial Scholarship**—Established as a memorial by friends and colleagues of William Heard, formerly a professor at IUP, the scholarship is awarded each year to a junior Chemistry major for his/her senior year. The recipient is selected by the Chemistry Department steering committee on the basis of contributions to the department and the university, financial need, academic record, and interview. Applications are available each spring in the Chemistry Department Office.

**Dr. Willard W. Hennemann, Jr., Memorial Scholarship**—Awarded to an undergraduate student with fifty-seven to ninety credits (junior standing) and a minimum QPA of 3.0 who is enrolled in the Mathematics Education area. Graduate students must be enrolled in the Mathematics for Elementary School Teachers program and enter the program with an undergraduate QPA of 3.0 or higher and/or achieve a minimum QPA of 3.0 after completing a minimum of six hours of graduate work.

**Stanley W. Lore Scholarship**—Awarded to the highest QPA for junior Psychology majors. The student is selected on QPA, Psychology QPA, and other evidence of outstanding academic work by a committee consisting of three Psychology faculty members.

**Ronald L. Marks Scholarship**—Awarded to a freshman Chemistry Education major and/or a junior Chemistry Education major. Students must have a 3.0 QPA to be eligible.

**Mathematics Graduate Scholarship Fund**—Awarded to full-time or part-time students not receiving assistantships.

**Arthur G. Morrell Memorial Scholarship**—Awarded to a Mathematics major completing the sophomore or junior year at IUP.

**PPG Computer Science Scholarship**—This PPG Computer Science scholarship is awarded annually to the foreign student with the highest overall QPA who is majoring in Computer Science and entering his/her junior year and has completed at least 9 credit hours of computer science.

**Albert R. Pechan Scholarship**—This is a scholarship for an outstanding science major selected by the College of Natural Sciences and Mathematics.

**Mildred M. Reigh Memorial Scholarship**—Awarded to students pursuing a degree in Mathematics Education or Elementary Education with a mathematics concentration. Recipients must have reached a minimum of junior standing (57 to 90 credit hours) and carry at least a 3.0 QPA.

**Howard E. Tompkins Scholarship**—Awarded to a full-time Computer Science major with the highest overall QPA entering the junior year who has completed at least nine credits of computer science. Must be awarded to a female if only one scholarship is being awarded.

## Robert E. Cook Honors College

Dr. Janet Goebel, Director; 412-357-4971

***Scholarships for incoming freshmen:***

**ARAMARK Distinguished Scholars Scholarship**—Awarded to students entering the Robert E. Cook Honors College based on academic promise.

**Anthony and Emma Calvetti Morino Memorial Scholarship**—Awarded to students entering the Robert E. Cook Honors College. Preference will be given to students who are working to provide resources for educational pursuits. A minimum QPA of 3.2 is required.

**Robert E. Cook Honors College Scholarship**—Provides scholarship support to talented undergraduate students enrolled in the Robert E. Cook Honors College at Indiana University of Pennsylvania.

**Natalie S. Fassett Scholarship Fund (awarded jointly with the University Scholarship Committee)**—Supports the Foundation Distinguished Scholars program, awarding renewable scholarships to outstanding freshmen. Preference will be given to students who attend Homer Center High School.

**Theresa Hart Gramley Memorial Scholarship (awarded jointly with the University Scholarship Committee)**—Established by bequest of Mrs. Gramley, a 1927 graduate of Indiana Normal School, this scholarship provides financial assistance to academically promising students.

**Earl and Frances Kinney Memorial Trust Scholarship**—Awarded to talented undergraduate students at IUP who demonstrate financial need as determined by financial standards used by the University Scholarship Selection Committee.

**Kresge Foundation/Cook Honors College Scholarship**—Provides scholarship support to talented undergraduate students enrolled in the Robert E. Cook Honors College.

**Colonel Leonard A. and Mary D. McQuown Memorial Fund (awarded jointly with the University Scholarship Committee)**—Supports the Foundation Distinguished Scholars program, which awards scholarships to outstanding freshmen. The awards may be renewed for four years. Preference will be given to graduates of Punxsutawney High School.

**Dr. and Mrs. Arthur W. Phillips Scholarship Fund (awarded jointly with the University Scholarship Committee)**—Supports the Foundation Distinguished Scholars program, which awards scholarships to outstanding freshmen. The awards may be for four years. Preference will be given to residents of Butler, Clarion, Forest, Jefferson, Lawrence, Mercer, and Venango counties.

**Florence Wallace Scholarship Fund (awarded jointly with the University Scholarship Committee)**—Supports the Foundation Distinguished Scholars Program, which awards scholarships to outstanding freshmen. The awards may be renewed for four years.

**Board of Governors Scholarships**—Up to thirty-five full-tuition scholarships are awarded each year to academically talented minority students who have scored approximately 1000 on the SAT and who are in the top 25 percent of their high school class. The BOG scholarships are renewable for a maximum of eight fall/spring semesters for recipients who maintain a satisfactory QPA.

**Foundation for IUP Distinguished Scholars Awards**—The Foundation Distinguished Scholars Program was established to honor outstanding students. Candidates must rank in the top tenth of their high school classes and/or score at least 1100 on the SAT.

## Miscellaneous Scholarships

Ms. Diane Raybuck, Associate Dean of Admissions; 412-357-2230

***Scholarships for incoming freshmen:***

**Gloria J. Croft Bolinger Memorial Scholarship**—Awarded annually to a graduate of Tussey Mountain High School. Recipients are selected by the Tussey Mountain administration and faculty.

**Iva Carlson Memorial Scholarship**—Awarded to a permanent resident of Warren County, Pa., enrolled in the College of Natural Sciences and Mathematics. Preference given to female graduates of Warren Area High School. Consideration given to financial need. Must attain a 3.0 QPA to maintain scholarship for four years.

**Patti Hurley Scholarship**—A four-year scholarship is awarded to a graduate of Indiana Area High School attending the university, based upon academic achievement, participation in school activities, and economic need. This memorial scholarship was established by the family and friends of a 1971 graduate of Indiana Area High School who was killed in an automobile accident two weeks after high school graduation.

**Natalie S. Fassett Scholarship Fund (awarded jointly with the University Scholarship Committee)**—Supports the Foundation Distinguished Scholars program, awarding renewable scholarships to outstanding freshmen. Preference will be given to students who attend Homer Center High School.

**Theresa Hart Gramley Memorial Scholarship (awarded jointly with the University Scholarship Committee)**—Established by bequest of Mrs. Gramley, a 1927 graduate of Indiana Normal School, this scholarship provides financial assistance to academically promising students.

**Earl and Frances Kinney Memorial Trust Scholarship (awarded jointly with University Scholarship Committee and Honors College)**—Awarded to talented undergraduate students at IUP who demonstrate financial need as determined by financial standards used by the University Scholarship Selection Committee.

**Kovalchick Scholarship (St. Mary's)**—Awarded each year to a graduate of St. Mary's High School who attends IUP. Applications are available in the Guidance Office of St. Mary's High School. Recipient must be in good standing and a Pennsylvania resident.

**Thomas and Flora McGrainor Memorial Scholarship**—Offered to a student from Dayton (Pa.) high school who is enrolling at IUP. Recipient must demonstrate financial need, a 2.5 cumulative QPA, and involvement in extracurricular activities and/or community services.

**John W. McNaul Scholarship**—Awarded to a graduating senior from Somerset (Pa.) high school who will be attending IUP as a full-time student and who demonstrates financial need.

**Colonel Leonard A. and Mary D. McQuown Memorial Fund (awarded jointly with the University Scholarship Committee)**—Supports the Foundation Distinguished Scholars program, which awards scholarships to outstanding freshmen. The awards may be renewed for four years. Preference will be given to graduates of Punxsutawney High School.

**Frank E. Moore Endowment**—Awarded to a nontraditional incoming freshman who has graduated from an Indiana County high school or who has been a resident of Indiana County for one year. Maintenance of 2.25 QPA overall. Preference will be given to those with children.

**Morino Scholarship**—Awarded to academically promising and financially deserving undergraduate students. Preference given to students from historically mining communities whose parents or grandparents are employees or retirees or expired while working in the mines; who are in the upper 10 percent of their high school class; who score 1100 on the SAT; and who demonstrate a financial need. Eligibility restricted to graduates of high schools located within Indiana County.

**G. William Musser Scholarship**—Scholarship is awarded to the most qualified incoming freshman. Student must major in one of the pre-law majors. Renewable if student maintains a 3.0 QPA.

**Margaret M. Patton Foundation Scholarship**—Established to assist students attending the university who are worthy of and in need of such assistance. Preference will be given to students attending the Armstrong Campus.

**Dr. and Mrs. Arthur W. Phillips Scholarship Fund (awarded jointly with the University Scholarship Committee)**—Supports the Foundation Distinguished Scholars program, which awards scholarships to outstanding freshmen. The awards may be for four years. Preference will be given to residents of Butler, Clarion, Forest, Jefferson, Lawrence, Mercer, and Venango counties.

**William E. Pierce Scholarship**—Established to award a one-year grant to the junior ROTC cadet having the highest standing in his/her sophomore ROTC class.

**President's/Corrine Menk Wahr Scholarship**—A $1,000 scholarship awarded to entering freshmen who are valedictorians of their high school at the end of their junior year. No application is required.

**Carino Queen Evergreen Scholarship**—Awarded to a resident of Indiana County and to Indiana County's Queen Evergreen if she attends IUP on a full-time basis.

**Joseph W. Serene Memorial Scholarship**—Awarded to a graduating senior from Indiana Area High School who has enrolled at IUP, has achieved a good academic standing (3.0 QPA), and is active in school and/or community groups and demonstrates good citizenship.

**Martha S. Scheeren Scholarship**—Awarded to an IUP student residing in Indiana County between the ages of twenty-three and fifty years who is economically disadvantaged. Preference will be given to graduates of Indiana County high schools and to women. Secondary preference will be given to residents of Armstrong, Cambria, and Jefferson counties.

**Sons of Italy Recreative Club, Inc., Scholarships**—Scholarships are awarded to graduates of Indiana County schools, with the exception of Homer-Center, who enroll as full-time students at IUP.

**Michael J. Supinka, Jr., Memorial Scholarship**—Awarded to a full-time entering freshman who is a graduate of Homer Center High School and who demonstrates academic excellence and leadership qualities.

**Tomb Family Scholarship Fund**—Awarded at the discretion of the president to talented and deserving students.

**Vaughn Foundation**—Two $500 scholarships are awarded to incoming freshmen demonstrating academic promise, financial need, and a willingness to give a portion of their time to community service. Students must also participate in men's football, men's basketball, or women's basketball. Preference given to students enrolling in the Eberly College of Business. Renewable for up to four years provided the student maintains good academic standing and athletic eligibility.

**Florence Wallace Scholarship Fund (awarded jointly with the University Scholarship Committee)**—Supports the Foundation Distinguished Scholars Program, which awards scholarships to outstanding freshmen. The awards may be renewed for four years.

**West Branch Area High School Scholarship**—Awarded to graduates of West Branch Area High School, Clearfield County (or any named successor created by a consolidation of high schools), who demonstrates financial need and positive academic achievement (minimum 2.5 out of 4.0 cumulative QPA).

**Coraopolis Wolves Club Den IX Scholarship**—Provides a scholarship to full-time undergraduate students who graduated from Moon, Cornell, or Montour school districts and who are in the upper quarter of their graduating class. Awards may be renewable based upon maintenance of good academic standing and availability of funds.

**Board of Governors Scholarships (awarded jointly with Honors College and Office of Admissions)**—Up to thirty-five full-tuition scholarships are awarded each year to academically talented minority students who have scored approximately 1000 on the SAT and who are in the top 25 percent of their high school class. The BOG scholarships are renewable for a maximum of eight fall/spring semesters for recipients who maintain a satisfactory QPA.

**Foundation for IUP Distinguished Scholars Awards (awarded jointly with University Scholarship Committee and Honors College)**—The Foundation Distinguished Scholars Program was established to honor outstanding students. Candidates must rank in the top tenth of their high school classes and/or score at least 1100 on the SAT.

***Scholarships for currently enrolled students:***

**American Association of University Women Scholarship**—Awarded annually to nontraditional female residents of Indiana County, based upon financial need and successful completion of at least six credits leading to a degree.

**American Field Service (AFS) Scholarship**—One full-tuition scholarship will be offered to an AFS student for one year. Letters of application should include a brief description of the student's AFS experience.

**APSCUF Scholarship**—The IUP APSCUF Scholarships are awarded to students who have earned between twenty-nine and forty-six credits and who have shown involvement in IUP and community services.

**Israel and Birdye Brody Scholarship**—Scholarships are awarded each year to juniors who have at least a 3.8 average and who have served the university and/or community.

**Dr. Howard B. Buterbaugh Scholarship Fund**—A gift to the university from Dr. Howard Buterbaugh's estate, the scholarship is to be given to students from Indiana County based on their academic performance.

**Clark Scholarship**—The Lt. Alpheus Bell Clark Memorial Scholarship was established by Mr. and Mrs. Steele Clark in memory of their son. Scholarships are awarded each year to young men or women who are seniors at the university, who, in the opinion of a committee, best qualify for the honor in terms of academic ability, leadership, and service to the university, with preference going to veterans or sons or daughters of veterans.

**Goldstrohm/Citizen's Ambulance Scholarship**—Awarded to an employee of Citizen's Ambulance Service, Inc., who is actively enrolled as a full-time or part-time student.

**Harrisburg Alumni Chapter of IUP Scholarship Fund**—Awarded to a sophomore or junior (twenty-six to ninety credits) with a QPA of 3.0. Preference extended to children of alumni active in Harrisburg and to Pennsylvania residents from Cumberland, Dauphin, or northern York counties. Consideration also given to residents of other counties included in the Harrisburg Alumni Chapter membership, such as Adams, Franklin, Lancaster, Lebanon, and Perry counties.

**Kuzneski Family Scholarship**—This scholarship is awarded to an IUP student with a declared major in Nursing or Art or participating in intercollegiate football. Preference is given to students graduating from Indiana County high schools.

**Edward E. And Cecilia A. Mackey Scholarship**—Awarded to students enrolled in the Eberly College of Business with a declared major who have earned at least 48 credits and who have a 3.0 cumulative QPA. First preference given to students who participate in the IUP men's football program and are in good academic standing.

**Miss IUP Scholarship**—A $500 scholarship is awarded to the winner of the Miss IUP Pageant for use in the subsequent academic year.

**Margaret M. Patton Foundation Scholarship**—Established to assist students attending the university who are worthy and in need of such assistance. Preference will be given to students attending the Armstrong Campus.

**Lenora Pechan Scholarship**—Awarded to ROTC students as recommended by the ROTC staff.

**Phi Delta Theta Memorial Scholarship**—Established in memory of Randy Colalella and Jeffrey Diez. Funds are awarded to full-time students who are members in good standing of Phi Delta Theta and who have a QPA of at least a 3.0. Selection chosen by the Office of Financial Aid.

**William E. Pierce Scholarship Fund**—Established to award a one-year grant to the junior ROTC cadet having the highest standing in his/her sophomore ROTC class.

**Carino Queen Evergreen Scholarship**—Awarded to a resident of Indiana County and to Indiana County's Queen Evergreen if she attends IUP on a full-time basis.

**Saco Excelling Greek Scholarship**—Scholarships are awarded to outstanding Greek juniors named at the spring Greek awards banquet.

**Ethel Seavey Simpson Scholarship**—Awarded to academically talented freshmen at IUP who demonstrate financial need. Eligible applicants will be invited to apply.

**Senior Class Scholarship Award**—A yearly scholarship awarded to a full-time student who has earned seventy-five to ninety credits at the end of the first semester of the junior year, who has a QPA of at least 3.5, and who is involved with campus affairs, organizations, and activities.

**Patricia Shields Memorial Scholarship**—This $500 scholarship is awarded each year to a full-time student from Armstrong County who has achieved junior standing and carries at least a 3.0 QPA. Preference may be given to students who originally attended the Armstrong Campus of IUP.

**Tomb Family Scholarship Fund**—Awarded at the discretion of the president to talented and deserving students.

**Weiken and Associates Scholarship**—Awards are made to upper-level students (sophomore or junior) in the college on a rotating basis among the departments of the College of Natural Sciences and Mathematics and among the departments of the College of Humanities and Social Sciences who have successfully completed at least thirty credits and have achieved a 2.75 cumulative QPA.

**Luhelen Grace Whisner Memorial Scholarship**—Awarded to students who demonstrate academic promise, good citizenship, and financial need whereby receiving no other private scholarship support from IUP for academic or athletic performance. Preference is given to students from Westmoreland County.

**Zonta Club of Indiana Scholarship for Women**—The Zonta Club provides a scholarship for a female IUP student who has earned at least twenty-four academic credits, is twenty-five or older, and is a resident of Indiana County. Eligible students must demonstrate hardship need, exemplify personal character, have a commitment to academic excellence, and demonstrate promise for future success.

## Athletic Scholarships

Ms. Frances A. Nee, Athletics: 412-357-2779

***Scholarships for incoming freshmen and currently enrolled students:***

**Bratton-Hathaway Scholarship**—Provides scholarship awards to talented and deserving student athletes participating in the football or baseball programs at IUP.

**Martha Crooks Douds Scholarship**—Designated to support IUP intercollegiate athletics.

**Jack Crossan Memorial Scholarship**—Awarded to a men's basketball player of character and sound academic standing. Selection is made by the head basketball coach.

**Owen J. and Virginia Dougherty Memorial Scholarship**—Provides overall team support for the IUP baseball team.

**Michael Gendich Endowment for Athletics**—Provides scholarships for worthy and deserving student athletes.

**S. W. Jack Scholarship Fund**—Provides athletic scholarships for the intercollegiate athletic program.

**Ward C. and Sally B. Johnson Memorial Scholarship**—Scholarships are awarded to one outstanding male and one outstanding female athlete entering their junior year of college or who have successfully completed 60 credit hours. The recipients are selected by the athletic director and the various varsity coaches.

**Keystone Rehabilitation System's Men's Basketball Scholarship**—Provides scholarship assistance to deserving and needy student athletes on the men's basketball team.

**Mr. and Mrs. Joseph Kovalchick Athletic Scholarship**—Supports IUP intercollegiate athletics.

**Men's Basketball Scholarship**—Awarded to student(s) who participate in the IUP men's basketball program.

**Regis A. McKnight Memorial Scholarship**—The scholarship is awarded to male high school graduates excelling in athletics as a tribute to Regis "Peck" McKnight, who for many years was head basketball coach. Selection of recipients will be made by the athletic director and the head basketball coach.

**Louis J. Nocco Scholarship**—Provides scholarships to deserving and talented student athletes who participate in the IUP football program.

**Ruth Podbielski Scholarship**—Awarded to female students who participate in the IUP athletics program.

**Willis Pratt Football Scholarship**—Established by S&T. These scholarships are awarded to athletes chosen on the basis of scholastic and athletic ability and financial need.

**Richard "Moe" Smith Endowment Scholarship**—Provides financial aid support to talented and deserving student athletes in the IUP football program.

**Sam Smith Football Scholarship**—Awarded to a student who participates in the IUP football program.

**Cecil and Ann Spadafora Scholarship**—Awarded to one football player each year who has graduated from an Indiana County high school, a Mt. Pleasant high school, or a Brentworth high school. The student is selected by a committee consisting of the IUP athletic director, head football coach, and a representative of the Spadafora family. The recipient will be a high school graduate excelling in athletics and a credit to the fund.

**Paul E. and Josephine F. Spears Scholarship**—Provides scholarship awards to talented and deserving student athletes in the IUP football program.

**Gerald E. Stossel Football Scholarship**—Provides scholarships to deserving and talented student athletes who participate in the IUP football program.

**Student Co-op Women's Athletic Scholarship**—Provides support for women's athletics.

**Saul and Louise Waxler Memorial Scholarship**—Provides scholarships for students participating in the IUP football program.

**Women's Basketball Scholarships**—Provides athletic scholarships for the women's basketball program. Funds will be used to provide deserving student athletes with financial assistance.

## School of Continuing Education

Dr. Nicholas Kolb, Dean: 412-357-2209

***Scholarship for a currently enrolled student:***

**Continuing Education Part-time Scholarship**—Awarded to part-time nontraditional students admitted to or enrolled in degree-seeking programs in the School of Continuing Education. Applications are available in the Financial Aid Office and the Part-time Studies Program Office two months before the beginning of each semester.

## Graduate School

Dr. David Lynch, Dean; 412-357-2244

Scholarship information is found in the Graduate School catalog, which can be obtained in Stright Hall.

# Other Resources

**Athletic Grants-in-Aid**—IUP participates in intercollegiate athletics as a Division II institution and awards Athletic Grants-in-Aid in accordance with NCAA rules and regulations. Interested students should contact the Athletic Director, Memorial Field House, IUP, Indiana, PA 15705.

**Resident Assistants**—Upperclass students and freshmen at the end of their first year may apply to become resident assistants at IUP. Students earn a room and board waiver, as well as a small stipend, by working as resident assistants in IUP residence halls. Application timetables and deadlines are advertised in the *Penn* and posted in the residence halls and other spots around campus. The application process requires references and individual and group interviews and participation in a semester-long training program prior to selection. Resident assistants are selected on the basis of leadership and interpersonal skills and the willingness and ability to perform as role models. Resident assistants must have and maintain a 2.2 quality-point average. For further information, please contact present resident assistants or residence directors or the Office of Housing and Residence Life, G14 Sutton Hall, IUP, Indiana, PA 15705.

**Private Scholarships**—Various service clubs, organizations, churches, schools, and industries offer scholarships to students. High school guidance offices, libraries, and hometown newspapers are often excellent sources for information concerning private scholarships.

**ROTC Scholarships**—Two- and three-year scholarships are available to both male and female students who are enrolled in the Reserve Officer Training Corps program. The scholarships pay for tuition, fees, and books, plus $150 per month for ten months per school year. Interested students may obtain applications and criteria information by contacting the ROTC department in Pierce Hall at IUP.

**Office of Vocational Rehabilitation Assistance (OVR)**—Students who have physical or learning handicaps may receive educational benefits through the Office of Vocational Rehabilitation. In order to be eligible, students must satisfy the physical and financial requirements of the agency. For further information regarding OVR, students should contact their county office of vocational rehabilitation.

## Veterans Benefits

In addition to regular sources of financial aid, veterans and dependents of veterans may be eligible for V.A. benefits. For further information, veterans are urged to contact the Veterans Counselor, 308 Pratt Hall, IUP, Indiana, PA 15705, 412-357-3009.

## Pennsylvania National Guard Educational Assistance Program (EAP)

The Educational Assistance Program has been established for members of the Pennsylvania National Guard. Students who make a commitment to serve in the Pennsylvania National Guard for six years may be eligible to receive a grant on a full- or part-time basis. If a student fails to fulfill his/her service commitment, any EAP grants which were previously received will be converted to loans and must be repaid with a seven-percent fixed annual interest rate. Applications and information are available from the individual's unit of assignment, the recruiting officer, or the Pennsylvania National Guard at 717-861-8530.

## Title IV Satisfactory Academic Progress Policy

In order to receive Title IV Federal Student Assistance, students must maintain satisfactory academic progress in their course of study. Students must be in compliance with both the university's Academic Standards Policy and the Financial Aid Sufficient Progress Policy in order to demonstrate satisfactory progress.

The Title IV Federal Student Assistance programs include the Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Federal Perkins Loan, Federal Work Study Program, Federal Stafford Loan, and Federal PLUS Loan.

A student who meets the standard of academic good standing of the Academic Standards Policy but who does not meet the standard of sufficient quantitative progress may continue in university registration but without financial aid eligibility for the federal Title IV aid programs.

A full statement of requirements for Satisfactory Academic Progress for Title IV Federal Student Assistance is available through the Financial Aid Office.

### Title IV Financial Aid Sufficient Progress Policy

The Financial Aid Sufficient Progress Policy applies to undergraduate and graduate students enrolled in the university.

**A. Sufficient Progress:** To be in good standing on a sufficient progress basis, a student must have earned at least 75 percent of the cumulative number of registered credits at IUP.

"Registered credits" is the number of credits for which a student is enrolled at the end of the Drop/Add period (for a student who was originally registered and charged at full-time status, and who reduces during Drop/Add to part-time status, the registered credits will be calculated as twelve).

Each student will be measured for sufficient progress annually after fall grade processing. This evaluation will determine if the student has a sufficient percentage of credits earned in order to be eligible for Title IV funding for the next financial aid award year (July 1 through June 30).

Students will be notified of their financial aid suspension status when a completed *Free Application for Federal Student Aid* (FAFSA) is on file in the Financial Aid Office.

**B. Financial Aid Suspension:** If a student does not meet the sufficient percent of progress evaluation after two consecutive annual reviews, then all Title IV aid for that student will be suspended beginning with the next financial aid award year (July 1 through June 30).

A student who is in this financial aid suspension status, however, will also be reviewed at the end of the spring semester and summer terms in order to evaluate whether or not the percent of progress has been met through additional coursework. If this improvement to 75 percent of progress is achieved, then the student's Title IV financial aid suspension will be rescinded beginning with the next term of enrollment.

**C. Appeal Process:** For students who have experienced unusual circumstances which have led to a lack of sufficient percent of progress, such as medical emergencies or death of a family member, a written appeal may be submitted to the Financial Aid Eligibility Review Board for consideration of reinstatement of Title IV aid eligibility.

A student who would like to appeal his Title IV financial aid suspension for the next financial aid award year must submit a written appeal to the Financial Aid Eligibility Review Board. This written appeal must specifically outline the reason(s) for the percent of progress deficiency and how the student will make up this deficiency. For students who do not appeal for fall review, or who are denied an appeal for the fall semester, an appeal for reinstatement of Title IV aid for the spring term will be accepted for review.

After reviewing the written appeal of a student in Financial Aid Suspension, the Financial Aid Eligibility Review Board may decide to reinstate Title IV financial aid eligibility for specific periods of the next financial aid award year. All appeal letters will be answered in writing by the Financial Aid Eligibility Review Board as to the approval or denial of the requested financial aid reinstatement.

**D. Reinstatement of Title IV Aid Eligibility:** For a student who has Satisfactory Academic Progress deficiency, one of the following must occur in order for that student to receive Title IV assistance:

1. The student can reestablish eligibility for Title IV assistance by meeting the minimum requirements for Satisfactory Academic Progress.

2. For a student who has not met the minimum criteria for Satisfactory Academic Progress due to unusual or mitigating circumstances and has filed an appeal(s) which has granted the student continuance of financial aid eligibility, Title IV aid funds may be reinstated.

**E. Summer Sessions:** Summer session attendance may permit the student to enhance satisfactory academic progress through additional coursework. For this reason, all students who lack sufficient progress will be permitted to receive Title IV financial aid funds during this period of enrollment, providing that their GPA is at least a 1.5 overall. Students who have a GPA of less than 1.5 must meet with their associate/assistant academic dean in order to discuss an appropriate "academic action plan." Financial aid eligibility for summer sessions will be reinstated once documentation of this discussion is received in the Financial Aid Office.

**F. Time Frame for Degree Completion:** All students must complete their degree requirements within an established time frame. Since enrollment status may vary from semester to semester, the maximum time frame for degree completion is measured in terms of credits attempted at IUP.

Under normal circumstances, an undergraduate student should complete the requirements for a bachelor's degree at the point of having 165 registered credits at IUP. Since 75 percent of the registered credits must be earned in order to be maintaining Satisfactory Academic Progress, 124 credits (the number generally required for graduation) would be earned at the point of having 165 registered credits.

For majors with graduation requirements in excess of 124 credits, the maximum number of registered credits would increase proportionally. For example, for degrees that require 130 credits, the maximum number of registered credits at IUP is 173 credits.

Students who exceed these credit guidelines due to loss of transfer credits, change of major, or double majors will be screened by the Financial Aid Eligibility Review Board for continuance.

**G. Treatment of Audits, Incompletes, and Other Grades:** In order that a student fully understands how various grades and enrollments impact upon the calculation of Satisfactory Academic Progress, the following information is provided:

1. **Audits and "S" and "U" Grades:** Because course audits and "S" and "U" grades carry no credits, they are not reviewed or counted for sufficient progress purposes.

2. **Incompletes:** Designations of "I," "L," "R," and "*" are treated as credits attempted/zero credits earned/no effect on QPA. However, these designations are treated as noncompleted credits and have an impact in the calculation of the percent of progress measure. (Note: The "*" is an administrative symbol indicating that a grade was not submitted at the time of grade processing.)

3. **"F" Repeat with Replacement:** An "F" repeat with replacement is treated as credits attempted/credits earned/with the quality points of the new grade replacing the 0.00 QP of the original "F" grade. An "F" repeat has a positive effect on the QPA and the percent of progress even though it represents an additional number of credits attempted in regard to the percent of progress measure.

4. **"D" Repeat with Replacement:** Repeated classes that are "D" replacements to a student's record are treated as credits attempted/zero credits earned/with the

quality points of the new grade replacing the 1.00 QP of the "D" grade. A "D" repeat with replacement may improve a student's QPA but represents an additional number of credits attempted in regard to the percent of progress measure.

5. **Repeats with Averaging:** Courses that are repeated with averaging count as credits attempted/credits earned/with the quality points for the class averaged into the QPA. The maximum time frame for degree completion may be impacted by repeat with averaging classes.

6. **Withdrawals:** Designations of "W" and "Q" are treated as credits attempted/zero credits earned/no effect on QPA. Any type of "W" designation is treated as noncompleted credits in the calculation of the student's percent of progress standing.

7. **Pass/Fail Grades:** Pass grades are treated as registered credits/credits earned/no effect on QPA. Fail grades are treated as registered credits/zero credits earned/with zero QP averaged into the calculation of QPA.

8. **Noncredit Courses:** Noncredit classes, such as those with Continuing Education Units (CEUs), are not used in measuring sufficient progress, since these classes cannot be applied towards degree requirements and no financial aid may be received for enrollment.

9. **Institutional Credits:** Institutional credits are counted as registered credits/credits completed. The QP for the course is not averaged into the student's overall QPA.

10. **Canceled Semester:** All credits for which a grade of "C" or better is earned in that canceled semester are counted as credits attempted/credits earned.

11. **Fresh Start Program:** Students who are readmitted under the Fresh Start Program will have their progress measured from their first semester of readmission without regard to prior enrollment.

## Payment of Financial Aid

The following financial aid programs can be deducted from your university bill:

- Federal Stafford Loan
- Federal PLUS Loan
- Federal Perkins Loan
- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant
- Pennsylvania State Grant
- IUP scholarships

Federal Work Study earnings are paid directly to the student every other week and thus are not used for billing purposes.

All other financial aid is paid directly to the student's account. If a credit balance exists after satisfying all IUP charges, then excess funds will be refunded to the student for other educational expenses.

# Student Programs and Services

## The Advising and Testing Center

The Advising and Testing Center provides a variety of services to IUP students and faculty. It runs the summer orientation program; offers career planning classes and computer-assisted career counseling to undecided majors; co-conducts registration for January freshmen and branch campus students; processes undergraduate total university withdrawals; serves the needs of students with disabilities; and assists in providing advising information to students and advisors. Its Disability Support Services component is responsible for ensuring IUP program access compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. The Advising and Testing Center may be contacted at 357-4067 (V/TD) (106 Pratt Hall) for further information.

## Athletics

**Frank J. Cignetti, Director; Frank J. Condino, Associate Director; Frances A. Nee, Associate Director; Erika C. Renwick, Business and Compliance Officer**

**Head Coaches: Tom Kennedy, Baseball; Gary Edwards, Men's Basketball; Sandy Thomas, Women's Basketball; Ed Fry, Men's and Women's Cross Country; Frank Cignetti, Football; Kofie Montgomery, Women's Field Hockey; Fred Joseph, Men's Golf; Joanna Parrett, Women's Gymnastics; Brian Lenosky, Women's Soccer; Sue Snyder, Women's Softball; Peter Ward, Men's and Women's Swimming; Jackie Albenze, Women's Tennis; Ed Fry, Men's and Women's Track and Field; Lori Duncan, Women's Volleyball**

### Varsity Sports

The university's men's and women's athletic teams compete at the Division II level of the National Collegiate Athletic Association and in the Pennsylvania State Athletic Conference.

Men's sports offered in the fall include cross country and football. The winter sports include basketball and swimming. The spring sports are track and field, golf, and baseball.

Women's fall sports are tennis, cross country, gymnastics, soccer, volleyball, and field hockey. In the winter, the sports of basketball and swimming are offered. Spring sports include softball and track and field.

### Intramurals

A well-organized and varied program of intramural sports and athletic activities is conducted for both men and women on a coeducational basis. Intramural handbooks are available from the Intramural Director, Room 101, Memorial Field House.

## Career Services

Career services are available to students and alumni, and career counseling is provided to students of all class levels as well as to alumni. In addition to career counseling, the primary functions of the office are to arrange for campus interviews, prepare a current file of job opportunities, maintain an extensive library of occupational information, conduct follow-up studies of graduates, and provide general assistance in the career planning and job-seeking process.

The Office of Career Services also receives and makes available to graduates and undergraduates information concerning summer employment.

Positions are not guaranteed by the university, but IUP's record of placement is one of the very best in Pennsylvania.

### Career Exploration/ Undecided Majors

Students with undecided majors are encouraged to explore options for majors as early as possible while at IUP; to delay doing so may delay graduation. Students desiring to explore majors may take a one-credit course, ED170: Career Exploration, taught by the Advising and Testing Center, or use the Career Exploration Center (CEC), 108 Pratt Hall. The CEC is open afternoons during the week. Appointments may be made by calling 412-357-5701.

## Counseling and Student Development Center

The Counseling and Student Development Center is composed of two parts: counseling services and student development programs.

The counseling services faculty members are psychologists who are assisted by advanced graduate students from the doctoral program in clinical psychology. These professionals facilitate the personal and emotional growth of students by offering confidential counseling and consultation on an individual and small-group basis. Beyond the Health Services fee, additional fees are not charged for counseling services.

Student Development Programs is staffed by one faculty member, the director, and a team of graduate students in the Student Affairs in Higher Education Program. Together they provide the following programs: summer orientation for parents of incoming freshmen, orientation for entering students immediately prior to the beginning of classes, the Six O'clock Series, and various research projects regarding student opinions and/or satisfaction.

## Health Services

The University Health Service operates an outpatient clinic and provides routine health care to students while classes are in session. The outpatient clinic is staffed with physicians, nurse practitioners, nurses, and educators. For emergency care of students when the Health Center is closed, the local hospital emergency room is available. The university has a contract to cover the cost of transporting a student to the local hospital for an emergency, if the student's health insurance policy does not include coverage of ambulance services.

In addition to primary medical care including minor surgery, some laboratory tests, and allergy injections, the University Health Service offers a self-care cold clinic and programs in chemical health, health education, wellness, and nutrition counseling. Free transportation to area medical facilities is available.

Students pay a per-semester mandatory student health fee which entitles them to unlimited visits at the Health Center.

Since Fall, 1991, IUP has required documentation of dates of immunizations from new students for the following vaccines: measles, mumps, rubella, tetanus toxoid-diphtheria, and polio. Individuals born after 1956 should receive a second measles immunization prior to entering college. It has always been important to update diphtheria and tetanus immunizations every ten years. The documentation must be included on the Student Health Form and can take the form of

1. dates of vaccinations by the health care provider who gave them or
2. date of illness with the disease diagnosed by a physician or
3. serum antibody level as determined by a blood test

Students will receive a copy of the Student Health Form from the Health Service after they receive notification of admission to IUP. The form must be returned to the University Health Services before starting classes.

### Services for Students with Disabilities

Disability Support Services (a unit of the Advising and Testing Center) is the primary agent for the provision of access for IUP students with physical and learning disabilities. Faculty and staff within the office serve to ensure IUP's program access compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. Students with disabilities are urged to register with the office. Services provided include, but are not limited to, early registration; assistance in locating accessible housing; equipment loan; test proctoring and reading; notetaking; recording of books; NCR paper; liaison with faculty, OVR, and BVS; and general advising and counseling. Further information may be obtained in 106 Pratt Hall or by calling (412) 357-4067 (V/TD).

### Speech and Hearing Clinic

The Speech and Hearing Clinic, located in Davis Hall, offers diagnosis of speech problems, hearing tests and evaluations, and a regular program of therapy. The clinic also administers the speech clearance for teacher education programs.

These services are made available without charge to students regularly enrolled at the university to give the necessary assistance to alleviate deficiencies which would interfere with successful performance and progress in the university and in future work. Students are encouraged to use the facilities provided for them and may of their own initiative come to the clinic for help, or they may be referred by any faculty member or university official.

### Student Health Insurance

The university does not sponsor a group student health insurance plan. Students are encouraged to obtain private insurance to cover the costs of hospital-related expenses. The University Health Service does not bill insurance companies for services. However, students receive a copy of each visit which can be used if the individual chooses to bill his/her insurance company directly.

## Housing Information

### Residence Life

IUP is a residential campus. Its fourteen residence halls and two apartment buildings are supervised by professional residence directors with backgrounds in student development or counseling or by graduate residence directors enrolled in the Student Affairs in Higher Education graduate program. Responsibilities include administrative functions of the building, programming, and policy enforcement. Each residence hall also has undergraduate resident assistants (RAs) who are responsible for helping students, planning programs, carrying out administrative tasks, and providing leadership for the development of a community among the approximately thirty students living in their individual section of the residence hall. The university's two apartment buildings are staffed with a professional residence director and student managers whose functions are similar to those of a resident assistant.

It is the policy of IUP to offer full, equal, and nondiscriminatory assistance to all students without regard to their race, color, religion, national origin, sex, ancestry, sexual orientation, or physical ability in both the placement in university housing and the furnishing of facilities and services in relation to that housing.

Specific programs and services offered within the residence halls provide a residential program which supports the academic mission of the university and fosters the development of a community in which the rights and responsibilities of each individual are clearly defined and respected. Respect for the learning process as well as respect for self, others, and property are strongly emphasized. Students are encouraged to question and explore increasingly complex intellectual and personal challenges in their efforts to give meaning and direction to their lives. Staff members actively provide support and challenge students as they assume ownership and accept responsibility for their actions and important life decisions. The residence halls reflect the daily challenges of what it is like to live in any community. It is the intention of the Office of Housing and Residence Life staff to teach students those skills which prepare them to be responsible community members so that when they leave the university, they will be contributing and productive citizens in the larger community in which they live.

Because residence hall living is seen as a positive educational experience, students are encouraged to live on campus unless they are commuting from home. In an effort to make residence hall living more responsive to individual needs, the university offers two living arrangements: single sex and coed. Students should consider these options carefully and select the one in which they would feel most comfortable.

### Residence Hall Rooms

Student accommodations are based on double occupancy. Furnishings include beds, mattresses, desks, chairs, mirrors, dressers, cable TV, local and long-distance telephone service, and data line capabilities. Students should bring their own blankets, bedspreads, towels, study lamps, and mattress pads.

All IUP residence halls are equipped with study lounges, recreational equipment, laundry facilities, and locked mailboxes. In addition, computer terminals and other specialized equipment are located within each area for student use. Residence halls are locked twenty-four hours a day, and each resident's I-card is programmed to provide access to his/her hall.

**Refrigerators/Microfridges:** Residents can rent refrigerators or microfridges (an appliance which has a microwave, refrigerator, and freezer combined into one unit) for their rooms. Students benefit directly from this program,

since profits are used to upgrade special facilities and furnishings in the residence halls. Residents can also use their own refrigerators as long as the unit does not draw more than three amps of electrical current and occupy more than 2.4 cubic feet of space.

### Residence Apartments

IUP's two apartment buildings provide single student housing in an apartment-style setting. The university provides cable TV, telephone service, data lines, stove, refrigerator, kitchen table and chairs, beds, dressers, and living room furniture in each apartment.

Rooms/apartments are available to both undergraduate and graduate students enrolled at IUP. Each year the university reviews its housing policies and revises them according to needs for the following year. The Office of Housing and Residence Life is also responsible for dining service and providing information and services related to off-campus housing. The Office of Housing and Residence Life is located in G14 Sutton Hall, 357-2696.

### Telephone Service

Local and long-distance telephone service is provided for each residence hall room and apartment. Students must, however, provide their own touch-tone telephones.

AT&T College and University Services (ACUS) provides long-distance service to residence hall rooms and apartments at a reduced rate from the AT&T standard. Residents are issued Personal Security Codes to gain access to the ACUS system. Each month individual student bills for toll calls and telegram charges are mailed directly to the student. There is a $150 credit limit on long-distance calls to assist students in managing their telephone budgets.

The university has contracted with Bell Atlantic for $4 worth of local calling message units each month. Students who make local calls in excess of the $4 limit will receive bills from Bell Atlantic for the balance.

### Cable Television and Data Lines

IUP has installed a fiberoptic network which makes cable TV and data lines available in student rooms.

### Insurance for Personal Belongings

Students are encouraged to carry insurance that covers the loss or theft of valuables while residing in residence hall or apartment housing. Students are also advised to determine coverage available through their parents' homeowners policy and consider a rider if necessary to provide the appropriate coverage while at the university or to consider obtaining property insurance through an independent insurance carrier. The university does not assume responsibility for loss to students' belongings.

### Automobiles

Students, faculty, and staff members who park vehicles in campus parking areas must register their vehicles with the Campus Police Office. Resident students will be issued parking permits for the following reasons: medical necessity, student teaching, or other academic need for a vehicle. A written application must be submitted to and approved by the Parking Authority Review Board. Parking will be available to resident students not meeting the aforementioned criteria, for a fee, to park in the Robertshaw lot. The Campus Police Office is located in Sutton Hall and can be contacted for information on parking as well as copies of the current rules and regulations.

### Residence Hall Application

First-year and transfer students will be offered residence hall contracts as soon as they remit the $75 tuition prepayment required to secure a place in the incoming class. The contract should be reviewed carefully and returned with an $80 housing prepayment. Rooms will be assigned as contracts are received. Students will be notified of housing assignments after July 15.

Continuing students may contract for university housing for the following academic year according to the process published and posted in January.

Students being readmitted or returning from student teaching or study abroad programs should contact the Office of Housing and Residence Life for a contract.

## Dining Services

IUP offers twelve meal plans, eight (A through H) of which are available to residence hall students. Refer to the Finance section for the respective meal fees.

**Plan A**—Unlimited access to Foster and Folger halls only
**Plan B**—19 meals a week + $50 in Flex money*
**Plan C**—19 meals a week
**Plan D**—Any 240 meals a semester
**Plan E**—Any 14 meals a week + $100 in Flex money
**Plan F**—Any 14 meals a week
**Plan G**—Any 165 meals a semester
**Plan H**—Any 10 meals a week + $100 in Flex money
**Plan I**—Any 10 meals a week
**Plan J**—Any 75 meals a semester
**Plan K**—Any 5 meals a week + $100 in Flex money
**Plan L**—Any 5 meals a week

Meals provided through these plans are for the use of the contract holder only.

*Flex money can be carried from fall to spring semester; however, any portion not used by the end of the spring semester will be forfeited. Flex may be used for guests.

## The Learning Center

**Carmy G. Carranza, Director and Chairperson; S. Dean, S. Ender, Green, Hrabovsky, Jenkins, Lipsky, Wilkie, Winstead**

The Learning Center, a unit of the Student Affairs Division, provides various academic support services. Courses are offered which develop learning skills to enhance academic success. Courses in two levels of remedial mathematics (LC090, LC095) and two courses in reading (LC070, LC075) are offered for institutional credit. Institutional credit counts in determining full-time enrollment status but not in determining credits applicable for degree eligibility at graduation.

Learning Center faculty members also offer three one-credit courses in Educational Planning (LC150), Learning Strategies (LC160), and Career Exploration (LC170).

The Learning Center provides educational support services for all IUP students in the areas of reading, writing, mathematics, biological and physical sciences, foreign languages, social sciences, study skills, and related areas. These services are provided by both professional and undergraduate paraprofessional staff. Students are encouraged to participate in a broad array of program services including one-to-one and group tutorials, workshops, and formal classes provided by a trained staff of undergraduate paraprofessionals. These services are available in most content areas, as well as in general study skills.

The main Learning Center office is located in 202 Pratt Hall. Further information can be obtained by calling 357-2729.

### Act 101 Program

The Act 101 Program, created as a result of the Pennsylvania Higher Education Equal Opportunity Act 101 in 1971 by the legislature of the commonwealth, focuses on servicing IUP students in order to make the ideal of "equal educational opportunity" a reality for all qualified students. All students matriculating through the Learning Center, including those eligible for services under Act 101, receive a full program of freshman-year courses and advisement, including assistance in the areas of academic tutoring, career counseling, financial aid information, personal counseling, academic advising related to curriculum concerns, the selection of an appropriate major, and course scheduling. The main Act 101 office is located in 202 Pratt Hall. Further information can be obtained by calling 357-2729.

## New Student Orientation

IUP offers a two-part orientation program for all new students. Freshmen are expected to participate in both of the programs, as they are intended to provide information and programs which are designed to insure a successful first-year experience.

**Summer Orientation:** The preregistration placement testing, advising, and course selection program occurs during the summer immediately preceding students' matriculation on campus. This experience is designed to assess academic readiness for courses integral to the IUP curriculum, including English, mathematics, and foreign languages. Students admitted to the Indiana campus, Honors College, or the Learning Center program participate in an overnight, two-day experience which includes testing, academic advising, and orientation to university curricular requirements and cocurricular opportunities. Students who are admitted as branch campus freshmen participate in a one-day program. Concurrent parent orientation programs are offered.

**Fall Orientation:** Fall Orientation occurs as students move onto campus immediately prior to the beginning of fall classes. Programs and activities are designed to assure a smooth transition from the home environment to IUP's campus community.

IUP views this two-part orientation as unique and extremely important to freshman retention and satisfaction with the university. The freshman year is critical in regard to academic success. During this time, students must simultaneously develop academic competence in

the college curriculum and adjust to the personal decision-making process college life affords. Each of the programs is designed to assist in this important college adjustment process. Freshmen are expected to participate fully in this two-part program.

## Guidelines for Student Conduct

IUP is an academic community within the society at large. As a community, it has formulated a code of standards and expectations which the university considers to be consistent with its purpose as an educational institution. IUP reaffirms the principle of students' freedom coupled with an acceptance of full responsibility for one's behavior and the consequences of such behavior. As a member of the academic community and of the larger society, a student retains the rights, protections, guarantees, and responsibilities which are held by all citizens.

The judicial system of IUP exists to review all alleged academic violations as well as violations of university regulations and/or federal, state, and local ordinances. The primary intent of this educational system is to create a positive behavioral change in the students while also protecting the rights of the members of the university community. The system will hold the students accountable for their actions when regulations or statutes have been violated. A complete statement of regulations is available in the student handbook.

## Religious Life

The religious life of students is cared for through the activities of some twelve organizations which compose the IUP Interfaith Council. Two of these, the Newman Center and the Lutheran Campus Center, maintain private facilities near the campus. Others affiliate with and meet in local churches for worship and meetings.

## Student Activities, Associations, and Publications

### Residence Hall Association

The Residence Hall Association (RHA) represents all students living in university residence halls. The executive body of RHA is composed of elected representatives from each residence hall. The purpose of RHA is to provide educational, social, and community service programs for residents; to collect information on various aspects of residence hall life; and to assist in formulating housing policies and procedures. All residence hall students are encouraged to participate in RHA. Inquire at your residence hall office for involvement opportunities.

### Student Activities and Organizations

As participating members of the IUP community, students occupy a responsible role in governance of the campus. Since a valuable part of education lies in participation in groups where experience in leadership, social and community responsibility, intellectual curiosity, and religious interests can be met, participation in varied organizations is available and encouraged.

There are currently more than 180 active student organizations at IUP advised by faculty or staff selected by the students. Students are also encouraged to initiate and support new groups which reflect interests not represented by existing organizations.

Under the supervision of the Office of Student Activities and Organizations and funded for the most part by the Student Cooperative Association, many activities are orchestrated by students and offer entertainment and cultural programs for the entire university community. These activities provide a significant opportunity for students to become more involved with their campus as well as to experience the growth and personal development that involvement provides.

Organizations and activities sponsoring many of IUP events include The Entertainment Network (TEN), Artist Series, African American Cultural Center, Black Emphasis Committee, Ideas and Issues Series, Summer Activities, and the University Concert Committee. Participation in these and other groups is strongly encouraged.

### Student Congress

The Student Congress is the representative and recognized voice of IUP's student body. The Student Congress was created in the spring of 1989 to be a unified voice in a bicameral (two-house) arrangement. It is led by a president and a vice president elected at-large in a spring general election. The primary responsibility of the Student Congress House lies with the student members of various university advisory bodies, including the Student Cooperative Association Finance Committee, which allocates $300,000 in support of university activities. Each member of the Student Congress Senate serves as a representative on the University Senate, the institution's chief governing body. The Student Congress meets biweekly. Every student enrolled at IUP is considered a member of the SC, and input is always sought and welcome.

### Student Cooperative Association

The Student Cooperative Association has played an extremely broad role in the cocurricular life of the university for more than sixty years. All students, faculty, and staff who pay the Activity Fee are members of the association. Virtually all campuswide activities outside the instructional program are sponsored wholly or in part by the association.

The Activity Fee is the chief source of income for the association's programs. The student's I-Card will admit him/her free of charge or at a reduced fee to university social, cultural, and athletic events. Other income for the association comes from the profits of the Co-op Store and income from events sponsored by the association.

The Student Cooperative Association operates the Hadley Union Building, which houses the Co-op Store, and the Co-op Recreational Park. The Hadley Union Building, built by association members through the Activity Fee, offers many facilities for use by the university community.

The Co-op Recreational Park comprises 270 acres of wooded hillsides and fields. Included are a lodge building which will accommodate groups of up to two hundred people, a ski hut, and an eighteen-station exercise course, cross-country skiing and hiking trails, picnic shelter, archery range, and two softball fields.

### Student Publications

*The Penn*, IUP's campus newspaper, is published three times a week during the fall and spring semesters by students wishing to gain practical newspaper experience. Interested students are advised to attend organizational meetings held in the beginning of each semester.

*The Oak* is the university yearbook, a pictorial and written review of the year's activities. Subscriptions may be purchased in the fall or early in the spring semester. *The Penn* will carry notices of subscription drives. Applications for staff positions may be obtained from *The Oak* office or from the advisor.

*The Source* (the student handbook) is distributed to all students free of charge. It includes rules and regulations, the extracurricular program, and general information of interest to students.

## University Post Office

The University Post Office is located on the ground floor of Folger Hall, at the corner of Pratt Drive and Maple Street. All United States and campus mail is picked up and delivered daily to administrative offices and residence halls from this location. As it is a contract station of the Indiana, Pennsylvania, post office, the University Post Office also provides a window service for university personnel for all postal services including box rentals.

## Veterans Affairs

The Veterans Affairs Office certifies enrollment for undergraduate and graduate students who may be eligible for veterans assistance.

Veterans, reservists, and children of deceased or disabled veterans should contact the Veterans Affairs Office prior to enrollment.

**Veterans must submit:**
1. Application for Benefits (VA Form 1990)
2. Certified DD214

**Reservists must submit:**
1. Application for Benefits (VA Form 1990)
2. Notice of Basic Eligibility (DD2384)

Children of a deceased or disabled veteran whose death or injury was due to service-related causes may be eligible for educational assistance from the federal government under Law 634 (Dependents Educational Assistance Act). Immediately upon acceptance to IUP, men and women who qualify for such assistance should contact the veterans counselor and submit:

1. The Eligible Veteran DD214
2. Survivors Education Form 22-5490
3. Application for Benefits (VA Form 1990)

A veteran receiving VA benefits must request a change in curriculum clearance from the veterans counselor before changing curriculum. Twelve credit hours are required to be considered a full-time undergraduate student by the Veterans Administration. The minimum full-time requirement for a graduate student is 9 credit hours.

The Veterans Affairs Office provides many other services to veterans. These include academic support, tutoring, housing assistance, financial aid, and general information. The Veterans Affairs Office is located in 302N Pratt Hall. For information on forms, please call 412-357-3009. The Federal Veterans Office telephone number is 800-827-1000.

# Academic Policies

## Grades and Quality Points

In the grading system, the following grades are used in reporting the standing of students at the end of each semester or session:

| Grade | Description | Quality Points |
|---|---|---|
| A | Excellent | 4 quality points/semester hour |
| B | Good | 3 quality points/semester hour |
| C | Average | 2 quality points/semester hour |
| D | Passing | 1 quality point/semester hour |
| F | Failing | 0 quality points/semester hour |
| P | Passing | 0 quality points/semester hour (for credit courses only) *(See Pass/Fail policy for more information.)* |
| S | Satisfactory | 0 quality points (for zero-credit courses only) |
| U | Unsatisfactory | 0 quality points (for zero-credit courses only) |

**Other Designations** (carrying no quality points):

| | | |
|---|---|---|
| I | Incomplete | Student was unable to complete the coursework due to unexpected illness or personal emergency. *(See "I (Incomplete) Policy" for more information.)* |
| L | Late Grade/ Continuing Course | Student work is expected to extend beyond a given semester. *(See "L (Late Grade, Continuing Course) Policy" for more information.)* |
| Q | Total University Withdrawal | Used when a student has totally and officially withdrawn from the university for a given semester. The "Q" designation is not issued by instructors. *(See Total University Withdrawal Policy for more information.)* |
| R | Research in Progress | Only to be used to indicate deferred status for graduate thesis and dissertation courses. |
| W | Individual Course Withdrawal | Used when a student has elected to withdraw from an individual course but not from all courses. The "W" designation is not issued by instructors. *(See Individual Course Withdrawal Policy for more information.)* |
| * | Grade not reported by instructor | No grade information was reported by the end of the normal grading period. |

## Grading Policies

Shortly after each semester or session, a full grade report is mailed to each student at his or her mailing address.

Quality points are not counted on credits from other schools, and a student transferring from another school is held responsible for quality points only on work taken at this university.

Cumulative Quality Point Average is determined by multiplying the semester hours for a course by the quality points received for that course. Then the total number of semester quality points for all courses are divided by the total number of semester hours attempted.

Institutional Credits are associated with remedial courses which are numbered below 100. Credits from institutional credit courses do not apply to degree requirements for graduation but are used in determining enrollment status (full or part time) including financial aid and athletic (NCAA) eligibility.

### Audit Policy

To audit an undergraduate course, a person must be admitted to the university and have met course prerequisites. Students wishing to audit a course for which they registered should obtain a Course Audit Form from the department chairperson of the course. To audit a course not previously registered for at registration, students must first register for the course before filing a course audit form. All audit processing,

including revocation of previously requested audit classification, must be completed during the regular drop/add period. Copies of the completed form are returned to the Scheduling Center, to the department chairperson, and to the student. Audit students have the same privileges as other students in all coursework. There is no limit on the number of courses which may be audited.

All audited courses will be identified as such on the student's grade report and transcript. Work taken on an audit basis will not be graded and will not count toward the fulfillment of requirements for a degree to be awarded by IUP. Since semester hours attempted and quality points will not be awarded for audited courses, they will not affect the student's quality-point average in any way. Auditors will pay normal tuition and such other fees as may be required for the course.

## Cancelled Semester Policy

The Cancelled Semester Policy permits students returning after significant separation from the university to delete from the Cumulative Grade-Point Average (CGPA) calculation the results of one particularly unfortunate semester. A student who has not been enrolled in four consecutive semesters and the intervening summer sessions may apply upon application for readmission or within one year of readmission for the application of this policy to any single semester completed before readmission. While readmission may be based on the application for cancelled semester, the transcript record will reflect this only after the student is enrolled and attending. [For cancellation purposes, a semester is defined as any semester of enrollment, whether full or part time, with sessions in a single summer together constituting one semester.] All grades—passing, failing, withdrawals—in that semester must be cancelled from the CGPA. There is no abridgment of the transcript: the courses and grades remain visible on the official transcript. Credit toward graduation remains for those credits associated with passing grades. A student may never cancel more than one semester from his/her CGPA under this policy.

## Course Repeat Policy

A student may not normally repeat an academic course. Exceptions to this policy are:

1. **Repeatable courses:** Certain courses are eligible to be repeated for credit and grade. These courses are advanced art studio courses, music ensembles, special topics courses (281, 481) if the topic is different, and other courses specifically designated.
2. **D and F grades:**
   a. Repeat with replacement: Undergraduate students are permitted to replace the grades and quality points for courses in which they receive a D or F grade by repeating that course at IUP and filing a repeat form with the Scheduling Center. Only six repeat-with-replacement attempts are permitted during a student's entire undergraduate career. In calculating GPA, the new grade and quality points earned will replace the old. However, the transcript continues to document all academic work, and repeated courses are not deleted from the visual record.
   b. Repeat with averaging: In addition to the six repeat-with-replacement options, undergraduate students may repeat other courses in which they receive a D or F grade. In these other repeat attempts, the new grade is averaged with, instead of replacing, the prior D or F grade; the credit for the D repeat counts only once. The transcript continues to indicate all repeated courses.
   c. Course transfers: Students seeking to replace or average D and F grades must repeat these courses at IUP. If an IUP course in which a student received an F is repeated at another institution, the credit will transfer to IUP, but the original F will continue to count toward the IUP GPA. If an IUP course in which a student received a D is repeated at another university, neither the grade nor the credit will transfer.
3. **Other grades:** Courses in which students earned a grade of A, B, C, or P may be repeated only on an audit basis. New grades will not be assigned and additional credit will not be awarded.

This policy also applies to transfer credit. Students receiving transfer credit for an IUP course may not repeat that course at IUP. Similarly, students who have already earned a passing grade in an IUP course may not subsequently receive transfer credit for that same course.

## Fresh Start Policy

A student who has been academically dismissed and separated from the university for a minimum of five consecutive calendar years may apply for readmission. Having reviewed the prior and intervening factors for evidence of potential for improved academic success, the college dean or designee may readmit the student. This policy applies to a student's first baccalaureate degree, and a student may be readmitted under this policy only once. A minimum of 30 semester hours must be completed at IUP after a student returns to IUP under this policy.

A student who wishes to enter a college other than the one from which he/she was dismissed will apply to the original college, and that college will forward the application and related records to the new college for action.

**Conditions for a Fresh Start Record:** All credits and grades for IUP coursework taken prior to readmission under this policy shall remain on the transcript. Upon readmission, a new cumulative record (QPA) is established based upon credits and grades earned from the date of readmission.

**Prior Record:** Previously accepted transfer credits and IUP courses in which grades of C or better were earned prior to readmission will be reviewed in terms of appropriateness (applicability, timeliness) to the new degree. Those courses approved by the college dean or designee will be counted as semester hours earned and applied toward graduation in the manner of transfer credits.

**Academic Standards:** A student who is readmitted under the provisions of this policy shall be required to meet current degree requirements. He/she shall be academically reviewed under the policies published in the academic catalog at the time of rematriculation. A student readmitted under this policy waives the right to exercise the cancelled semester policy.

## Grade Change Policy

Once earned grades have been recorded, they may be changed only in the case of clerical and/or calculation error or in the event of a successful grade appeal. It is not appropriate to change a grade based upon options, such as supplemental assignments, that are not equally available to all students. The deadline for corrections of clerical and/or calculation errors is the end of the next regular (fall/spring) semester after the grade has been awarded.

## I (Incomplete) Policy

The designation of I is used to record work which, so far as covered, is of passing grade but is incomplete because of personal illness or other unavoidable reason. Changes of grade to convert designations of I must be received in the Office of the Registrar no later than the last day of regular classes preceding the final exam period in the next regular (fall/spring) semester after the I designation was assigned. The dean of the college in which the course is offered may approve an extension, provided the faculty member concurs. A faculty member assigning an I designation must complete a form indicating the work to be completed, deadlines for completion (it is not necessary to allow the maximum allowable time), and guidelines to establish the final grade. Copies of the completed form will be sent to the department chairperson, to the dean of the college in which the course is taught, and to the student receiving the I designation. To monitor I designations, the registrar shall submit to each faculty member routine semester reports of outstanding I designations.

## L (Late Grade, Continuing Course) Policy

The designation of L (Late grade, continuing course) is appropriate for cases in which student work is expected to extend beyond a given semester/session. The designation of L is not to be confused with a designation of I, which is only appropriate for individual students unable to complete their course work because of unexpected illness or personal emergency. L designations are appropriate for:

a. Internships, practicums, field experience courses, workshops, and independent studies that, by design, extend beyond the normal end of the grading period.

b. Others as approved by the department chairperson and the dean of the college in which the course is taught. If a specific course is always eligible for L designations, the dean may grant standing approval for L designations every time the course is offered.

Faculty wanting to use the L option for eligible courses must notify the registrar before grade sheets are printed (normally two weeks prior to the end of classes) so that the grades can be pre-entered on the grade sheet. L designations which are not precoded on the grade sheets may be given only with the permission of the department chairperson and the dean of the college in which the designation is awarded.

Instructors will convert L designations to letter grades at the end of the course. Unless an exemption is obtained from the dean of the college in which the course was taught, L designations unresolved at the end of one year will be converted to an F.

To monitor L designations, the registrar shall submit to each faculty member routine semester reports of all outstanding L designations awarded by that faculty member. The purpose of these reports is to help inform faculty as they help students complete their coursework.

### Pass-Fail Policy

The purpose of pass-fail is to permit a student to take an elective course in a field of personal interest where he/she may be competing with major students in the department in which the course is offered. When scheduled, such a course shall be included in the student's normal course load for the semester.

A student may take courses on a pass-fail basis to a total of 15 semester hours throughout his/her university career. The student is limited to one pass-fail course in any given semester during the sophomore, junior, and senior years. All courses in the student's Liberal Studies program and in his/her major and minor fields are excluded from this prerogative.

The student must declare his/her intent to choose pass-fail in a specific course no later than six weeks after the beginning of the semester or the equivalent timespan in a summer session. Once declared, this pass-fail option may not be revoked. Instructors will not be notified of the identity of pass-fail students in their courses. The grade given by the instructor will be translated to a "P" or "F" during the grade processing process.

A student shall be given academic credit without quality points for a course taken pass-fail upon receiving a passing mark in the course. The semester hours successfully completed under pass-fail ("passed"), within the overall 15-semester-hour limitation, shall be recorded as counting towards the total semester hours earned for graduation but not towards the semester-hours-attempted data used in calculation of the cumulative quality-point average. However, if a student fails a pass/fail course, he/she will receive the "F" grade and the corresponding quality-point average. An F earned under the pass/fail option may be repeated only under the graded option to provide the quality points to correspond to the "hours attempted" incurred with the "F."

The summer sessions, collectively or in any combination, shall be considered a unit similar to a spring or fall semester for pass-fail purposes. Hence, a student is permitted to take only one course during the summer on a pass-fail basis.

## Other Academic Policies

### Advanced Placement and Credit/Exemption Examinations

Courses taken by students prior to admission to college under the Advanced Placement Program of the College Entrance Examination Board may be recognized by the award of college credit or by exemption from required subjects. Those who earn a grade of 3, 4, or 5 in the Advanced Placement Examination will be granted credit toward the number of credit hours required for graduation.

For students who have had other unusual opportunities for instruction or have advanced in a given field, an opportunity to gain credit and/or exemption from a course is afforded through examinations. University Testing Services in the Career Services Office (302 Pratt Hall) offers credit options through the College Level Examination Program (CLEP).

Students have an opportunity to gain exemption or credit through successful completion of comprehensive examinations by requesting from the academic department an exam as a substitute for completing all the usual requirements of the course.

A student who passes an exemption examination will be exempt from taking that course in his/her academic program. When a student receives credit for a course by examination, the credit will be applied to graduation requirements just as though the course had been taken. If a student is granted exemption only from a course, he/she will be permitted to take a free elective in place of that course. This enables the student to specialize further, to correct weaknesses outside his/her major field, to build his/her knowledge in an ancillary area, or to introduce himself/herself to an entirely different area.

Courses for which credit or exemption are awarded by examination will not be used in the determination of quality-point averages.

### Advisory Program

A group of selected faculty members act as freshman advisors for entering freshmen in their departments. In some curricula the advisors continue with the same group of advisees from year to year. In other curricula the freshman advisors remain with their advisee groups only for the students' first year; under this program, the student is then assigned an academic advisor for the remaining years through to his/her degree in a chosen field.

Faculty advisors counsel the students on academic achievement, dropping courses, changing curriculum, student activities, study schedules, and personal problems.

### Classification of Students

In order to be classified as full-time, undergraduate students attending any regular academic year semester must be currently enrolled in at least 12 semester hours.

During the IUP summer sessions, a student must be enrolled in a total of 12 semester hours during the entire summer (Summer 1 and Summer 2) in order to be certified as a full-time enrollee.

Full-time certification for students enrolled in instructional periods which do not conform to the regularly scheduled academic sessions will be based upon the number of enrolled semester hours during that period of enrollment (e.g., 1 semester hour in one week of instruction would equal the minimum full-time certification standard).

For purposes of designating students by class, the following credit-hour classification ranges are used:

| | |
|---|---|
| Freshmen | 28 semester hours or less |
| Sophomores | 29-56 semester hours |
| Juniors | 57-90 semester hours |
| Seniors | 91 semester hours or more |

Class designations are based on credits earned rather than credits attempted. Persons holding a degree and working for a second baccalaureate degree may be classified as seniors.

### Computer Software Policy

It is the policy of IUP that contractually protected and/or copyrighted computer software shall not be improperly copied, distributed, or used by its employees, students, or affiliated organizations. It is the responsibility of each member of the university community to adhere to this policy and to enforce it with regard to those they supervise. If any member of the community has a question regarding the propriety of using software, he/she is responsible for contacting his/her supervisor for direction. The supervisor may in turn refer the questions to the director of Academic Computing of the ISCC for a decision on what constitutes proper use. The full text of the policy adopted by University Senate and Council of Trustees in May, 1988, is available in the computer laboratories and from the director of Academic Computing.

### Internship/Cooperative Education

Many departments of the university have developed internship/cooperative education programs which allow a student to participate in university-supervised work experiences for variable academic credit. Internships/co-ops are viewed as an integral part of a student's academic preparation. An internship/co-op gives the student an opportunity to apply theoretical and philosophical tenets of a discipline in a practical job experience related to the student's academic program.

Students may apply for an internship if they have completed 57 semester hours and have at least a 2.0 QPA. Internship sites are normally located within a 500-mile radius of the campus. Overseas placements are located near an IUP center. Internships are available in state and federal offices; businesses at the local, state, and national level; state-related agencies; corporations; and foundations.

Students may apply for a co-op if they have completed 30 semester hours and have at least a 2.0 QPA. Two experiences are required. Sites are national and international. Placements parallel those of the internship program.

Because internships are viewed as an integral part of the student's academic program, students who are interested in specific internship programs should consult with the internship advisor in the department of their major. A maximum of twelve credits is applicable to an undergraduate degree program from any combination of co-op and internship experiences.

For general information about university internships, co-ops, and placement options, the students should consult the Experiential Education Program or their department internship/co-op coordinator.

### Normal Semester Hour Loads
A normal semester hour load is 15-17 semester hours. A student who wishes to schedule more than 18 or more semester hours must obtain approval from the dean of the college in which he/she is registered: approval will be predicated upon various criteria such as the student's demonstrated competencies, total courses, and specific conditions. If approval is granted, the dean will set the credit limit and direct the appropriate computer entry. When taking more than eighteen credits, a student is responsible for paying a per-credit fee at the current rate for each credit beyond eighteen.

### Reserve Officers Training Corps
The United States Army established a unit of the Reserve Officers Training Corps at the university in 1950. In fulfilling the university's three-credit Liberal Studies requirement in Health and Wellness for graduation, students may take four credits of Military Science and receive full credit for the Health and Physical Education requirement. Enrollment in the four-credit ROTC option incurs no military obligation whatsoever and allows the student the option of competing for a three-year ROTC Scholarship.

Upon graduation from the university and successful completion of the Advanced Course ROTC program, the student will receive a commission as a second lieutenant and serve from three months to three years on active duty, depending on active Army requirements. As an alternative to active duty, the individual may either be chosen or volunteer to complete his/her service obligation with the Army Reserve or National Guard.

Students seeking advanced degrees can be granted an educational delay by the Army following completion of their baccalaureate degrees. Upon completion of the advanced degree, students then enter active duty or Army Reserve/National Guard duty.

### Schedule Changes (Drop/Add)
The university registration system is characterized as one of continuous registration, using either Telreg (telephone registration) or Termreg (terminal registration). From the student's initial registration time for a given semester until the beginning of classes for the semester (except for specified restricted times), a student may modify his/her schedule to the extent that classes are available or permission to register for a restricted section has been granted and entered into the computer system. Deadlines for the opportunity to drop or add sections are published in the schedule of classes bulletin every semester. Each student is responsible for making the appropriate computer transactions to ensure schedule accuracy. Note particularly that while the department may enter permission to register for a section, the actual registration transaction must be entered by the student. The schedule of classes information includes specific directions for registration and modification for students.

### Sophomore Screening for Junior Status Approval
General policy at IUP permits each college to determine its own scheme for evaluating the development and progress of its major students. However, each college is expected to employ some effective procedure for such evaluation.

Several of the colleges use a procedure called "Sophomore Screening for Junior Status Approval" with the following required: All students (in such a college) enrolled in their fourth semester or who will complete 57 semester hours attempted by the end of the current semester must apply for Junior Status approval by filling out an application form by the deadline date designated and announced.

All students should check with their faculty advisors to determine which colleges use "Junior Status" screening procedure and the criteria for Junior Status Approval.

### University Policy on Semester Course Syllabi
Each faculty member shall prepare and distribute, without charge, to each student within one week of the first meeting of the class a semester course syllabus. The syllabus will be consistent with course content and catalog description, which was approved by the Curriculum Committee of the University Senate for the initial course offering or revision.

The semester course syllabus is a vehicle of communication to promote student academic planning and to avoid misunderstandings of course plan and requirements.

It is recommended that each syllabus include:

a. the faculty member's name, office location, telephone number, and office hours
b. an outline of the course content, objectives, and prerequisites, as appropriate
c. information about the required textbook(s) with title, author, and edition, and any other required materials
d. information on the determination of grades, including the weight, types, and scheduling of evaluations, other planned requirements, and expectation for class participation
e. statement of policies and/or penalties for make-up exams and late submission of assignments

## Withdrawal Policies

### Individual Course Withdrawal Policy (effective on June 1, 1995)
An undergraduate student is permitted five individual course withdrawals at IUP. Exceptions for unusual circumstances, if any, will be by letter of petition to the dean of the student's college, with appropriate documentation of the circumstances.

Individual Course Withdrawals may be processed only during the first two-thirds of the term. Instructors are required to inform students of their standing in class prior to this time. A student wishing to withdraw from a course after the deadline may request a waiver through the office of the dean of his/her college. Approval is contingent upon documentation of exceptional events of a catastrophic nature that could not have been anticipated.

At the time of implementation, each continuing student will have five additional individual course withdrawal options, without regard to the number of his/her previous course withdrawals.

Students may begin using the computer STAR system to withdraw from a course after the official drop/add period has closed. At the two-third point for each semester, students may no longer individually withdraw from individual classes.

### Total University Withdrawal Policy
An undergraduate student who does not register for the succeeding semester or, having registered, does not appear for classes at the beginning of the succeeding semester, is considered to have withdrawn from the university. Thereafter, he/she must apply for readmission as prescribed under "Admissions and Registration."

Any undergraduate student voluntarily withdrawing from the university during a semester or a summer session must secure a Withdrawal Form from the Advising and Testing Center, 106 Pratt Hall, 412-357-4067. The student will clear the form with the appropriate offices listed on the form, securing their signatures as evidence of clearance. (Students seeking medical withdrawal must also provide the Advising and Testing Center with a physician's corroboration of a medical need to withdraw.) The Withdrawal Form will then be returned to the Advising and Testing Center, which will notify the appropriate college dean, campus agencies, and instructors that an official withdrawal has been processed. No person shall be considered withdrawn from the university within a semester or session unless such notice is received. Designations of Q will be assigned to all registered courses in the semester/session from which the student is withdrawing.

Any undergraduate student involuntarily withdrawing from the university as a result of suspension or expulsion will have the designation of Q assigned to each registered course as a result of such judicial action.

## Honors

### Academic Honors
IUP recognizes academic achievement through Dean's Lists, Provost's Scholars, and graduation honors.

### Dean's List
Undergraduate students receive recognition on the Dean's List for each semester (or summer sessions cumulatively) in which they earn at least a 3.25 quality-point average based on at least twelve credits of graded (not P/F) coursework.

### Graduation Honors
Traditional Latin honors are awarded at graduation to bachelor's degree candidates with appropriate academic records. Calculation is based on all undergraduate credits and quality points earned at IUP. Graduation honors are not granted for second (subsequent) degrees. The distinctions are:

*Cum laude*—3.25 to 3.49 cumulative quality-point average
*Magna cum laude*—3.50 to 3.74 cumulative quality-point average
*Summa cum laude*—3.75 to 4.00 cumulative quality-point average

Beginning December. 1994, non-Latin honors are awarded to associate degree candidates. The distinctions are:

With Honor—3.25 to 3.49 cumulative quality-point average
With High Honor—3.50 to 3.74 cumulative quality-point average
With Highest Honor—3.75 to 4.00 cumulative quality-point average

### Provost's Scholar

Sophomores and juniors who have a cumulative quality-point average of 3.50 and above at midyear are named Provost's Scholars and are recognized at an annual Honors Convocation, usually in April.

## Course Attendance Policies

### Undergraduate Course Attendance Policy

The university expects all students to attend class.

Individual faculty members may define attendance standards appropriate to each course and the consequences of not meeting those standards, within the following guidelines:

1. Each policy must be distributed in writing during the first week of the course. Normally, it is expected that the information dealing with class attendance standards will be distributed with the Semester Course Syllabus.
2. Each policy must recognize students' need to miss class because of illness or personal emergency.
3. Each policy must define some limited level of allowable absence, normally at least a number of clock hours equal to course semester hours.

*Approved May 13, 1994, Council of Trustees*

### Anticipated Class Absence for University Representation and Participation

The university community recognizes the values of student participation in cocurricular and extracurricular activities of the university. IUP has fostered this participation with an informal policy of good faith accommodation to meet overlapping demands of the curricular and extracurricular commitments.

The underlying spirit of good faith accommodation ultimately is set in the faculty member's unabridged right to determine the terms of variance, if any, from the established course syllabus—tests, quizzes. due dates for papers or other assignments, projects, presentations, and all other course operations.

In seeking variance. the student must take the initiative to make all arrangements including validation of participation as needed. The student should generally assume that papers and such assignments should be completed and submitted before the anticipated class absence. Alternate arrangements for tests, quizzes, labs, or class participation activity (panels, simulations. presentations) should be sought sufficiently in advance to permit faculty/student agreement on the plan for completion, whether the actual completion is rescheduled to be prior to or subsequent to the anticipated absence.

*Approved by University Senate April 26, 1988, and Council of Trustees May 13, 1988*

## Change of Major Policies

### Change of Major

To qualify for change of major, a student must be in academic good standing (2.00 GPA) and must meet any other requirements specific to the major. The following majors have requirements beyond 2.00 GPA: Criminology and all teacher certification programs.

A student must apply for a change of major in the office of the dean of the college in which the student is registered if the curriculum change desired is from one department to another within the same college (for example, change from a mathematics major to a biology major) or in the office of the dean of the college to which the student wishes to transfer if the curriculum change is from one college to another (for example, secondary education major to biology major). In either case, the student will complete an application form that is available in the dean's office. Before seeking a change of major, it is advisable that the student consult with the chairpersons of both the "old" and "new" departments.

When a student changes colleges, the dean (or dean's agent) of the college into which the transfer is sought will evaluate the student's credits before approving the transfer. A copy of the evaluation will be made available to the student and his/her new advisor if a change of major is effected.

In cases involving students who are veterans, the dean of the college into which transfer is sought (or dean's agent) shall give the veteran a statement of prospective approval and the effective date of the proposed changes. This statement shall also indicate the amount of extended training time the change of major will entail and the amount of credit loss, if any. The veteran shall take this statement to the veteran's counselor at least one month prior to the effective date of the change. No transfer of curriculum shall be made by veterans until V.A. approval has been assured.

### Change of Major to the College of Education

Students who wish to transfer to a teacher education program in the College of Education must have a cumulative QPA of 2.5 or higher. Students should complete the university Change of Major form and submit it to the department chairperson for the new program of study. The application for a change of major is reviewed by the department chairperson and/or coordinator for the teacher education program to which application has been made. If requirements are met and approval is granted, the Dean's Office in the College of Education processes the application.

Some programs in the College of Education require internal transfers to complete Step 1 of the 4-Step Process. Students entering these programs need to submit all Step 1 paperwork with the Change of Major form. Students should consult with the department chairperson or program coordinator of the new major to determine specific requirements for effecting a change of major.

## Policies for Education Majors

### Admission to Teacher Education and Certification

Admission to teacher education programs is governed by the 4-Step Process. This procedure is designed to improve the quality of teacher education and maintain program integrity. The process consists of four steps, with evaluation and advisement occurring at each step.

**1. Admission to Teacher Certification**

**Procedure:** Admission to teacher education programs at IUP is competitive. Although students may be accepted into the College of Education at initial application, they are not officially admitted to teacher education programs until qualified under the 4-Step Process. To qualify for admission to Step 1: Teacher Certification, a student should follow the guidelines listed below.

**Requirements:** At the point a student believes he or she will complete 29 or more semester hours with a cumulative QPA of 2.5 or higher, he/she must file an application for admission to the teacher education program. The application includes the following materials:

1. verification of completion of at least 29 semester hours
2. verification of a cumulative QPA of 2.5 or higher
3. a completed Teacher Certification Application signed by the advisor
4. official ACT 33/34/151 clearance forms
5. a physician's statement of TB clearance
6. a clinician's statement of speech test clearance
7. a clinician's statement of hearing test clearance

When all papers are prepared, they are submitted to the academic advisor for review and evaluation. The advisor recommends approval or denial and forwards the application to the Dean's Office, College of Education, for processing. Applications are processed immediately if all requirements are met. **Applications may be held for second semester freshmen waiting for grades/credits ONLY; applications will be processed following posting of semester grades.**

**Results:** If all Step 1 requirements are met, the student will be notified by letter of his/her admission to the Teacher Certification Program. This official admission makes the student eligible to take Core Education courses including: CM301 Technology for Learning and Instruction; FE202 American Education in Theory and Practice; EP202 Educational Psychology; and ED242 Pre-Student Teaching Clinical Experience I. **No student is allowed to register for Core Education courses until s/he has been granted admission to Teacher Certification.**

In some programs, official admission to Teacher Certification is required before enrollment in program coursework is permitted. Students should consult with their advisors or department chairperson to determine specific requirements for their program of study.

No student is guaranteed admission to the Teacher Certification Program. Acceptance into a program is at the discretion of the advisor. department, and College of Education. Any student with a criminal record should contact the College of Education immediately to determine his/her eligibility to become a commonwealth teacher.

Any student denied admission to the Teacher Certification Program must reapply at the time deficiencies are met.

**II. Admission to Junior Standing**

**Procedure:** When a teacher education candidate believes s/he will complete 59 or more semester hours with a minimum cumulative QPA of 2.5, he/she must file an application for Junior Standing with the Dean's Office in the College of Education.

**Requirements:**
1. Admitted to Teacher Certification
2. Completed at least 57 semester hours which may include accepted transfer credits
3. Minimum cumulative QPA of 2.5
4. Completion of EN 101 or equivalent with a grade of C or better
5. Completion of ED 242 and EP 202 with grades of C or better
6. Final speech and hearing clearances for students not cleared at initial testing
7. Submission of a Planned Program of Study on an approved form

Some programs have additional requirements for admission to Junior Standing; students should consult with their academic advisor, program coordinator, or department chair to determine specific program requirements.

The application is reviewed, evaluated. and signed by the academic advisor. If all requirements are met, the application is forwarded to the Dean's Office in the College of Education for processing.

**Results:** The student is sent written notification of his/her acceptance to Junior Standing. Upon official admission, the student is eligible to enroll in the following courses: ED342 Pre-Student Teaching Clinical Experience II; ED442 School Law; EP377 Educational Tests and Measurements; and courses in the methods of teaching.

If a student has not met the requirements of Step 2: Junior Standing. the student will be so informed by the Dean's Office in the College of Education. Enrollment in Core Education courses will be denied until all deficiencies are met.

A student may reapply for admission to Junior Standing when s/he has met all prerequisite requirements.

**III. Admission to Student Teaching**

**Procedure:** Students who have completed all university, college, and departmental requirements are eligible to apply for admission to Student Teaching. An application should be filed with the Office of College-School Partnerships at least one semester before the actual experience.

**Requirements**
1. Admission to Junior Standing
2. Satisfactory completion of at least 91 semester hours with a cumulative QPA of 2.5 or higher
3. Completion of the required Liberal Studies science courses with grades of C or better
4. Completion of the required Liberal Studies mathematics course with a grade of C or better
5. Completion of all required professional education core courses with grades of C or better (FE202, EP202, CM301, ED242, ED342, ED 442, EP377 (when required), and methods course(s) in the major area)
6. Affirmative recommendation by the student's major department advisor or program coordinator
7. Verification of the special education competency by a) EX300 Education of Students with Disabilities in Inclusive Elementary Classrooms (for elementary and early childhood majors), b) EX301 Education of Students with Disabilities in Inclusive Secondary Classrooms (for majors in secondary subject areas and K-12 specialty areas). or c) the Special Education Competency Test.
8. Submit evidence of final criminal and child abuse clearances (Acts 34/151 for Pennsylvania residents or FBI clearance for out-of-state students).
9. Satisfy supplemental departmental requirements, if any, as approved by the Faculty Senate and described in the department section of the undergraduate catalog.

**Results:** Students who make application and meet all requirements for Admission to Student Teaching will be placed for the final clinical experience by the Office of College-School Partnerships. **Placement is at the discretion of the student's major department and the Office of Educational College-School Partnerships.** Confirmation of acceptance and approval is made in writing and permits the student to register for student teaching during the normal registration process.

If requirements for Student Teaching have not been met. the student is informed in writing and will be administratively removed from the student teaching placement. The student may not register for student teaching until deficiencies are removed.

**In keeping with university policy, all student teachers are required to be registered for Student Teaching before they enter the classroom on the first day.** See the Academic Policies section of the catalog for more information.

**IV. Recommendation for Certification**

**Procedure:** Complete application for the Pennsylvania Department of Education Certification and file with the Office of Educational College-School Partnerships by the listed dates appropriate to the anticipated date of graduation.

**Requirements:**
1. A minimum grade of C in all professional education courses and an overall grade-point average of 2.5.
2. Review and recommendation by the major academic advisor indicating completion of all departmental teacher education requirements.
3. Completion of student teaching with a minimum grade of C.
4. Successful completion of the PRAXIS Core Battery, PRAXIS General Knowledge, and PRAXIS Specialty Area tests.

**Appeal Provision:** A student who believes that any requirement of this policy has been inequitably applied or that he/she merits special consideration may appeal through the proper channels: academic advisor, chairperson, College of Education dean (or designee). teacher education appeals committee. Appeals must be made before the end of the next regular academic semester following the application.

Every effort should be made to resolve the appeal through the process so described. If, at the conclusion, the student is still in disagreement with the findings, the student may request review before a special Teacher Education Appeals Committee. The committee will be composed of three voting members representing the faculty, cooperating teachers. and students to be elected each year by the Teacher Education Coordinating Committee.

To initiate an appeal, the student must file a form obtained at the Dean's Office, College of Education. Appeals will be heard only during the regular academic semester. The student will be expected to submit written documentation of his/her complaint about the process of review for continuation or eligibility in the teacher education program. The committee will review the materials and make its recommendation to the dean, College of Education. A final decision rests with the dean of the college, who is the certification officer.

**End Notes:** In all cases where advisor action is required, a department may choose to use a committee or other departmentally approved process. In cases where recommendations are supplied by someone other than the academic advisor, the department needs to place a copy of its policy and procedures on file with the dean of the College of Education.

Some departments have additional Junior Standing requirements in place. Departments may continue to apply those requirements but need to keep a current copy of these requirements on file with the dean of the College of Education.

The policy as here stated applies to all students applying to Teacher Certification Programs on or after September 1. 1988. and includes updated procedures and editorial revisions as submitted to the University Senate in May, 1990, and May, 1992.

### Removal of a Student Teacher from a Student Teaching Placement

**Purpose:** To establish reasons or a process for removal of a student teacher from the student teaching assignment. The first two items are consistent with Act 34, Criminal Record Check; item 3 establishes a procedure if student behavior is not consistent with appropriate expectations of the school district; item 4 establishes a process and assures that the student teacher learns of unsatisfactory progress as early as possible; and item 5 is an appeal process.

**Policy:** Student teachers are ultimately guests of the cooperating school districts and may be removed by the district officers. A student teacher may also be removed by IUP from the student teaching assignment for any of the following reasons:

1. If indicted for a felony which is covered in the School Code and Act 34, there shall be a removal of the student teacher from the school assignment until the matter is cleared. When the student is cleared of the indictment, the student teaching assignment will be extended to cover the time missed during student teaching.
2. If convicted of a felony which is covered in the School Code and Act 34, the student teacher will be withdrawn from the student teaching assignment and will forfeit the time spent during the student teaching assignment.
3. If the behavior exhibited by the student teacher is not acceptable to the school district, it should be documented by the school administrator/principal in collaboration with the cooperating teacher and the university supervisor/coordinator and director, Student Teaching Office. If after discussion with the student, improvement is evidenced, no further action will be taken by the Student Teaching Office.
4. If it is determined either by the cooperating teacher or university supervisor that the teaching competency of the student teacher is at an unsatisfactory level based on the teaching competencies indicated on the evaluation form and not in the best interest of the students, a three-way conference of cooperating teacher, university supervisor, and student will be held to discuss the concern possible, outcomes, and remedial strategies. If after consultation with university director of Student Teaching, removal from this student teaching placement is necessary, this action shall be done by the director of Student Teaching and the dean of the College of Education. This behavior should be documented and discussed as early in the student teaching experience as possible.
5. Decisions made under this policy may be appealed to the dean, College of Education (certification officer).

## Final Examination Policies

### Final Examination Policy

The final examination week is part of the regular academic program and must be incorporated into each instructor's course plan for the semester. Final examinations are not the only legitimate type of terminating activity, and therefore, the instructor may choose an appropriate activity that conforms to course objectives.

The terminating activity shall take place only at the time and location assigned by the Scheduling Center. Unless granted an excused absence, the faculty member responsible for the course must be present for the full examination period to direct the terminating activity. Faculty members may require student attendance at the terminating activity.

Faculty members who do not schedule or do not attend the terminating activity for a course may be subject to disciplinary action commensurate with unexcused absences. Block finals must be held as scheduled. Once the final examination has been set by the Scheduling Center, changes and absences must be approved by the instructor's dean.

During the examination period, the following general rules apply where conflicts exist:

1. The higher-numbered course takes precedence. Thus, a student enrolled in GE102 and EC325 would take the EC325 exam at the assigned time and the make-up in GE102.
2. If courses in conflict are the same level and number, an alphabetical determination by full name of the department will be made. For example, a student enrolled in AG421 and CS421 would take the AG421 exam at the assigned time and a make-up in CS421.

### Maximum Number of Exams on One Day/Conflicts

A student may not be required to take more than three final exams on any one regularly scheduled examination day. For any exam over three, a make-up exam must be scheduled by the instructor for the student, at his or her request, into another mutually agreeable regular final examination period. The rules determining conflict resolution (listed above) will determine which exam or exams a student may request as make-ups.

### Night Exam Policy

All tests, examinations, and quizzes should normally be administered during the prescribed course hours. Only in this way can the essential contracted nature of the time arrangements between student and professor be preserved and, at the same time, proper provisions made for the many extracurricular and personal activities involving students and faculty alike. Deviations to allow night exams for valid educational reasons, within the guidelines listed below, must be approved by the department and the dean.

**Guidelines**

1. Night exams can only be scheduled on Monday through Thursday evenings within the 6:00-10:00 p.m. time period.
2. Appropriate physical facilities must be arranged in advance without encroachment upon other authorized university functions.
3. If night exams are to be given, the day of the week on which they will be given must be listed in the undergraduate course schedule.
4. No night exam can take precedence over a regularly scheduled class.
5. Arrangements for nonpunitive make-up exams at a mutually agreeable time must be available for students that cannot attend the night exam.
6. For each hour of night exams, an hour of regularly scheduled class time will be cancelled. Such cancellations are prohibited during any period of two class days immediately preceding and any period of two class days immediately following holiday and/or vacation (recess) periods and semester terminations, appearing in the published academic calendar.

## IUP Student Grade Appeal Policy

### Grade Review Policy

If a student disagrees with the evaluation of his/her work by the instructor but has no basis for a charge of "discrimination" or "capricious evaluation" or "error," the student should discuss the matter directly with the instructor, and if unsatisfied, with the department chairperson, and if still unsatisfied, with the dean of the college in which the course was offered. In such cases, the decision of the instructor shall be final.

If a student believes that an improper grade has been assigned, an appeal may be filed on the following grounds:

1. **Discrimination:** On the basis of race, religion, national origin, sex, age, ancestry, handicapped status, affectional or lifestyle preference, or political affiliation.
2. **Capricious Evaluation:** Significant and unwarranted deviation from grading procedures and course outlines set at the beginning of the course (ordinarily in a written statement during the first week of the course) or grade assigned arbitrarily on the basis of whim or impulse. The student may not claim capriciousness if he or she disagrees with the subjective professional evaluation of the instructor.
3. **Error:** Demonstrable, objective determination that a mathematical or clerical error resulted in the entry of an incorrect grade.

### Procedures of Appeal

**Level I: Informal Resolution**

Every effort should be made to resolve the disagreement at Level I. The student must first seek a resolution to the disagreement with the instructor either in person or in writing. If the student is not satisfied with the results, the student must then speak with the chairperson of the department that offers the course. If still unsatisfied, the student must discuss the matter with the dean of the college in which the course is offered. A Student Congress member may accompany and advise the student during the Level I procedures. Only after all attempts for resolution at Level I have been exhausted may the student initiate Level II.

**Level II: Appeal Screening**

A. **Composition:** Each year there shall be appointed a Grade Appeals Committee to determine the existence of the substantive basis for appeal. The committee will be composed of seven voting members: three faculty members appointed by APSCUF, three members elected by and from the Senate Academic Committee (one faculty, one administrator, one student), and one student appointed by the Student Congress. A quorum consists of a majority of the committee. To take action, a majority of those present must be faculty members. If a quorum

of the Level II committee is not available to meet within the designated time limits, the Provost's Office will seek additional members from the appointing bodies. If these bodies are unable to respond in a timely manner, the Provost's Office may select additional members from the appropriate groups.

B. **Procedure to Initiate Appeal:** To initiate Level II of the appeal, the student must file an appeal form with the Provost's Office. This form must be filed within sixty (60) calendar days of the beginning of the semester immediately following the semester in which the grade was received. The Provost's Office may extend the sixty-day limit only in unusual circumstances when equity demands it and when the student's own procrastination or misunderstanding did not substantially contribute to the delay. [Note: Grade appeals will not generally be processed during the summer. Therefore, the appeal of any grade received in the spring or summer sessions normally will be processed in the fall. A review will be scheduled in the summer only when the student's academic eligibility is jeopardized by the grade in question or when the student is a graduating senior.] The Provost's Office will notify the appropriate dean, department chairperson, faculty member, and the Student Congress president of the student's initiation of the Level II process.

C. **Procedure to Process Appeal:** The student will be expected to submit written documentation of his/her complaint, and the faculty member will be expected to submit in writing the course grading procedure and any other pertinent information. Appeals based on discrimination will be reviewed according to current standards of nondiscriminatory action. Appeals based on capriciousness will be reviewed in light of the faculty member's announced evaluation and grading system. The committee will review the materials to deny or confirm appeal continuance. Denial of appeal continuance must be by a negative vote of four members of the committee. This committee will inform the Provost's Office of its findings. Within five (5) class days of the receipt of the committee's report, the provost or designee will notify the student and the faculty member of the findings. If the basis for appeal is determined to be substantive, the provost or designee will schedule a Grade Review Panel within fifteen (15) class days to be convened prior to the conclusion of the semester.

**Level III: Appeal Review**

A. **Composition:** The Grade Review Panel will consist of five voting members: one academic dean or associate dean and four faculty members. The Student Congress Executive Committee designee may advise as requested by the student. The affirmative action officer will advise in appeals based on discrimination. The panel will be constituted from the Grade Review Pool by random selection. The panel chairperson will be elected by and from the panel before each review.

B. **Membership:** The Grade Review Pool will be established in the spring term to serve for the following academic year. Using random selection methods, the pool and rotational order within the pool will be established by the Provost's Office. A pool of three deans or associate deans and twelve full-time faculty members will be maintained. In establishing the membership for each review panel, prior to each review the names of those designated as primary members of the specific panel and available as alternates will be supplied to all parties involved. A panel member may request (to the provost or designee) disqualification due to a conflict of interest. The student and the faculty member may eliminate names in proportion to the composition of the panel. Each may eliminate only one dean/associate dean and four faculty. The instructor and the student will be supplied a list of all primary and secondary pool members. The opportunity to disqualify panel members will take place only once. Resulting vacancies will be filled from the appropriate pool of alternates so that the panel will be composed of one dean/associate dean and four faculty. If through self-disqualification and challenges a panel cannot be constituted from the pool, then the Office of the Provost will supplement the pool using appropriate random selection methods.

C. **Procedure:**
   1. Both the student and the instructor will have the right to appear before the panel, present witnesses, and offer evidence. In addition to those specified in Level III, Section A, each may also bring one observer, with whom he or she may consult but who may not participate in the review.
   2. The panel shall determine its rules of order for internal operation. After hearing the evidence brought forth, the panel will privately deliberate and render a decision. If the grade appeal is upheld, the panel will constitute a committee of three appropriate faculty members (knowledgeable in the discipline but excluding the faculty member against whom the complaint was lodged), who will review the student's work and recommend the appropriate grade or suitable remedy. The panel will incorporate this information in its determination, which it then forwards to the Provost's Office for implementation, ordinarily within thirty days. The Provost's Office will initiate the processing of grade changes resulting from Level III decisions.
   3. The written report sent to the Provost's Office will state whether the student's appeal is upheld or denied; if upheld, the committee's evaluation and remedy will be included. Both the student and the faculty member have the right to review all documents related to the appeal. All documents supporting the report will be sealed and kept only as long as necessary (normally one year) to ensure the appropriate action is taken before they are destroyed or returned to the individual presenting the evidence.

**Ancillary Provisions**

A. **Continuing Rights:** This appeal does not supplant any legal rights afforded by the Commonwealth of Pennsylvania and/or the Government of the United States. Nothing in this policy abrogates or modifies any provisions of or rights under the Collective Bargaining Agreement.

B. **Discrimination in this policy generally means unlawful discrimination.** To the extent that any form of discrimination identified in this definition is not unlawful discrimination, this definition shall not be taken to create a cause of appeal against the university. In such cases, the final appeal procedures stated in this policy will be final and binding on the student.

C. **Tenure and Promotion Committee Membership on Grade Appeals Committees:** Members of the universitywide tenure and promotion committees may not serve concurrently on grade appeals committees.

D. **Support Mechanism:** The Provost's Office, after consultation with the Senate Academic Committee and APSCUF, will be responsible for identifying a pool of at least ten faculty members well versed in the preparation of grade appeals who will be available upon request to help students or faculty prepare documentation for the grade appeals process.

E. **Training/Support:** The Provost's Office will offer yearly information sessions/workshops to assist deans, chairs, grade appeals panel/committee members, and members of Student Congress/Academic Affairs Committee in identifying issues and to provide guidance for the resolution of grade appeals.

F. **Dissemination of Grade Appeal Information:** The Provost's Office will annually report to the university community a statistical summary of grade appeal data that does not compromise confidentiality including 1) the number of appeals filed, 2) the resolutions at levels II and III, and 3) the final implementation of Level III decisions.

G. **Appeals on Procedural Grounds:** Decisions may not be challenged merely because the Provost's Office fails to comply with Ancillary Provisions D, E, or F above.

H. **Intentional Misrepresentation:** Intentional misrepresentation in the filing of grade appeals by students will be referred to the university judicial system for students. Intentional misrepresentation by faculty in the grade appeals process will be referred to the Provost's Office.

I. **Confidentiality:** Students, faculty, administrators, and staff involved in processing and hearing grade appeals must respect the confidentiality of all aspects of these proceedings. Those breaching confidentiality subject themselves to possible disciplinary action. This shall not abridge the First Amendment rights of the student appellant nor the instructor against whom the appeal has been filed.

J. **Intended Purpose:** The grade appeal procedures are designed simply as a means to resolve differences between students and faculty related to grading. Unless there is intentional misrepresentation, the results of a grade appeal may not be used for disciplinary action of personnel.

K. **Faculty Compensation:** If a Review Panel (hearing) is scheduled at a time in the summer when any faculty member involved is not under contract, the faculty member will be compensated under terms mutually agreed upon at Meet-and-Discuss.

L. **Review of Policy:** Every five years the Senate Academic Committee will review, in consultation with the campus community, the operation of the Grade Appeals Policy and recommend changes deemed appropriate.

M. * **Amendment:** Amendments may be implemented upon concurrence by University Senate, APSCUF Representative Council, and Meet-and-Discuss.

***Note:** In the amendment process above, specification of University Senate implies the Council of Trustees' role in approving Senate actions and recognizes the Council of Trustees' final action to change policy.

## Prior Learning/Portfolio Assessment

### Prior Learning Assessment Programs

IUP offers several methods for earning university credit for college-level learning gained through work and life experience. Through the Office of Career Services, the College Level Examination Program (CLEP) offers standardized examinations in general and specific subjects. In addition, departmental examinations are also available in specific areas on a limited basis.

Where examinations are not available, portfolio assessment may provide the student with the opportunity to present evidence of learning for evaluation by a university faculty member. Through portfolio assessment, work and life experiences are evaluated to determine their appropriateness and applicability for university credit. Credits earned through prior learning assessment may not be applied towards university residency requirements for awarding of degrees. In addition, no more than one-half of a major may be earned by CLEP, departmental examination, and portfolio assessment. Contact the School of Continuing Education for information regarding portfolio assessment.

### Policy on Prior Learning Assessment

IUP has authorized a policy for assessment of prior learning that took place outside traditional classrooms in a procedure known as Portfolio Assessment. It is particularly designed for adults with extensive documentable knowledge from work experience, travel, independent study, or other out-of-class experiences.

### Portfolio Evaluation: Principles

1. Credit awarded through portfolio evaluation must conform to specific course titles listed in the IUP catalog. Credit awards for general broad areas (block credit) will not be permitted.
2. In order to request a portfolio evaluation, the student must be currently enrolled at IUP. Credit awarded must be intended for use as part of a degree or certification program.
3. Each department will determine the maximum number of credits to be awarded for prior learning for its major. In no case will more than one-half of the major be earned through CLEP, challenge examinations, and other forms of prior learning assessment.
4. Credits earned through portfolio assessment may not apply as residency credit for the purpose of awarding degrees.
5. Credit earned through portfolio assessment may be awarded only as regular course credit.
6. If a related examination is available through CLEP or if a challenge examination has previously been established for the course, a portfolio assessment of those credits will not be accepted.
7. Acceptance of portfolio assessment credits by the department will be indicated by the signature of the chairperson of the department offering the course. The dean of the appropriate IUP college and the dean of the School of Continuing Education must also indicate approval.
8. Students may qualify solely for undergraduate credit—not graduate credit.
9. The title of the course, the semester hours, and the indication that credit was earned through Assessment of Prior Learning will be recorded on the academic record. An appropriate code to reflect a satisfactory grade will be assigned if the portfolio is acceptable.

### Portfolio Evaluation: Procedures

1. Student meets with assistant dean for Credit Programs in the School of Continuing Education to determine the feasibility of earning credit through portfolio evaluation. Standard outlines of related courses are provided to student.
2. Preliminary Application Form—Student must provide a resume and answer the following questions:
   a. What have you learned that relates to this course?
   b. Where and when have you learned it?
   c. What documentation do you have that supports the claim?
3. A handbook to assist students in compiling a portfolio will be printed. It will show how to relate to the written portfolio learning gained through work experience, independent study, and other experiences. Evidence of learning through documentation of experience, completion of a project, and written examination will be explained. If there is sufficient demand, a workshop will be conducted to assist students.
4. **Fees:**
   Application Fee per Assessment: $15.00
   Assessment Fee: one-half the current rate of tuition per credit for each credit requested; to be paid when portfolio is submitted for evaluation.
5. The application will be submitted to the assistant dean for Credit Programs. Upon approval, the chairperson of the department offering the course will be requested to suggest the name of a faculty member to the dean of the college for approval.
6. The faculty member will meet with the student to determine the technique of assessment or a combination of techniques to be used, including interviews, documentation, observation of performance, examination, etc.
7. After the portfolio has been prepared by the student, it will be submitted to the dean of the School of Continuing Education for review, then forwarded to the appointed faculty member for assessment.
8. The faculty member will evaluate the portfolio, then make a recommendation for or against the award of credit and the amount of credit in the form of a letter, which must be approved and countersigned by the chairperson of the department offering the course. The portfolio will be forwarded to the dean of the college which oversees the student's curriculum to approve and verify that the course will be accepted as part of the student's program. Finally, the portfolio is sent to the assistant dean of the School of Continuing Education, who will notify the student and the registrar.
9. The registrar will list the course title, credit, and an indication that credit was earned through Assessment of Prior Learning. An appropriate code to reflect a satisfactory (S) grade will be assigned if the portfolio is acceptable.

## Academic Standards Policy

### Criteria Governing Continuance at IUP

Continuance at IUP is determined according to the university's Academic Standards Policy as approved by University Senate December, 1987, and Council of Trustees in February, 1988. This policy became effective July 1, 1988.

### Academic Standards Policy

The Academic Standards Policy applies to all undergraduate degree candidates of the university. Academic standards for students enrolled in graduate courses and programs will be defined and administered through the Graduate School. Academic standards for participants in nondegree programs will be defined separately.

Authority to administer the Academic Standards Policy is vested in the dean of the college which has jurisdiction for the student's primary major. That responsibility may be assigned to an appropriate designee. Students officially advised by the Learning Center are reviewed by the Learning Center director.

### Academic Good Standing

Every undergraduate student must maintain a cumulative 2.00 GPA to be in academic good standing. There are three review periods: January, May, and August. The August review period applies only to students newly matriculated through the Learning Center. Continuation of enrollment is permitted under defined circumstances.

1. **January Review Period:** The academic standing of each student is reviewed. A student whose cumulative GPA is below 2.00 is considered to be in a Probation status.
2. **May Review Period:** The academic standing of each student is reviewed. A student must have a cumulative GPA of 2.00 to be in good academic standing.
   a. For a student who matriculated during the preceding summer or September, the following criteria apply:
      — if the cumulative GPA is between 1.80 and 1.99, the student is continued on probation.
      — if the cumulative GPA is below 1.80, the student is dismissed.
   b. For a student who matriculated through the Learning Center/Act 101 during the preceding summer or September, the following criteria apply:
      — if the cumulative GPA is between 1.80 and 1.99, the student is continued on probation.
      — if the cumulative GPA is below 1.80, and the student is in compliance with the participation requirements of the Learning Center program, the student is continued on probation.
      — if the cumulative GPA is below 1.80, and the student is not in compliance with the participation requirements of the Learning Center program, the student is dismissed.

c. For a student who matriculated in the immediately preceding semester, the following criteria apply:
   — if the cumulative GPA is below 2.00, the student is continued on probation.
d. For all other continuing students, the following criteria apply:
   — if the cumulative GPA is below 2.00, the student is dismissed.

3. **August Review Period:** The August review period applies only to students newly matriculated through the Learning Center.
   a. Students who matriculate through the Learning Center/Act 101 and who complete the initial summer program with a 0.00 GPA (based on a calculation of all credits attempted) will be dismissed from the university at the conclusion of the summer program.

### Probation

1. **Definition:** Probation status is that status of any student who has a cumulative GPA less than 2.00 and who has permission to enroll in the university.
2. **Student responsibilities:** A student who is in Probation status is expected to meet with his/her advisor prior to or within the first week of each semester to review current course load and to establish a plan of contact for the semester. It is generally anticipated that a probation student will develop personal change strategies utilizing appropriate professional resources such as advisor, faculty, Counseling Center, Learning Center. Career Services, workshops, tutoring programs, and other support systems.
3. **Additional conditions:** As a condition of deferral of dismissal, a dean (or designee) may include specific conditions designed to promote improved academic performance.

### Dismissal

1. A student who does not meet minimum academic standards is subject to automatic dismissal in May. Dismissal is the normal consequence of cumulative performance below the academic standards as published; the office of the dean provides confirmation of dismissal status and additional information.
2. Dismissal in May or August includes the cancellation of previously scheduled fall classes and the elimination of guarantees associated with fall housing and dining contracts.
3. Appeal for deferral of dismissal: In certain cases extenuating circumstances may exist which in the professional judgment of the college dean or designee will warrant a brief extension of enrollment privilege at IUP. A student should understand that it is the student's responsibility to anticipate, to initiate, and to fully document and cooperate in all aspects of the process of appeal in a timely manner. The student must file in the office of the dean (or designee) the completed application for appeal with all supporting documentation pertinent to review of the appeal. All material must be filed by 4:00 p.m., June 15, to be considered for the fall semester.

### Readmission

1. All dismissed students seeking readmission must make application for readmission through the appropriate college office. A student who has been dismissed may use summer sessions at IUP in support of the application for readmission. The application will detail procedures including deadlines and information needed for consideration of readmission plan.
2. Students dismissed at the conclusion of the Learning Center/Act 101 summer program may apply for readmission beginning with the next Learning Center/Act 101 summer program in the following year.

### Sufficient Progress

The IUP Financial Aid Satisfactory Academic Progress Policy requires sufficient academic progress toward a degree on both academic good standing (GPA) and sufficient progress (percent of progress) bases. The standard of academic good standing is defined within the university's Academic Standards Policy. The standard of sufficient progress for financial aid eligibility is the successful completion of 75 percent of the cumulative number of registered credits at IUP. "Registered credits" are the number of credits for which a student is enrolled at the end of the Drop/Add period. (Registered credits will be calculated as twelve for students originally registered and charged at full-time status who reduce to part-time status during Drop/Add.)

A student who meets the standard of academic good standing of the Academic Standards Policy but who does not meet the standard of sufficient quantitative progress may continue in university registration but without financial aid eligibility for the federal Title IV aid programs.

A full statement of requirements for Satisfactory Academic Progress for Title IV Federal Student Assistance is available through the Financial Aid Office.

All courses taken at IUP become a part of the student's permanent academic record. The record shall show hours attempted, hours earned, and quality points earned.

The academic standing of all students is computed on the basis of courses attempted at this university and in the approved SSHE Visiting Student Program only. Credit is granted for work completed in other institutions in accordance with the stipulations set forth under "Admissions and Registration."

## Academic Integrity Policy

A. **Introduction:** IUP is an academic community within the society at large. All members within this community are expected to accept the responsibility for academic integrity and honesty. Academic dishonesty seriously erodes the quality of educational pursuits and is unacceptable at IUP. The following policies and procedures have been established to preserve the academic integrity of the university community, while also providing a process that protects the rights of students who allegedly violate these policies.

B. **Types of Violations:** Academic dishonesty includes but is not limited to the following:
   1. Providing or receiving unauthorized assistance in coursework, lab work, or during examinations or quizzes.
   2. Using unauthorized materials or devices, such as crib notes, during examinations or quizzes.
   3. Plagiarizing term papers, essays, reports, speeches and oral presentations, take-home examinations, computer projects, and other academic exercises by misrepresenting or passing off the ideas, words, formulas, or data of another as one's own. Examples include but are not limited to: incorporating verbatim or nearly verbatim portions of other sources into assignments without using quotation marks and specifying the sources of the material; incorporating ideas from other sources into assignments without acknowledging the source of the ideas.
   4. Possessing course examination materials before the administration of the exam, without the prior knowledge or consent of the instructor.
   5. Intentionally evading IUP academic policies and procedures; for example, improperly processing course withdrawals, grade changes, or other academic procedures.
   6. Falsifying information, including forging signatures on various forms and documents, or altering or adding answers on academic exercises or exams after work has been graded.
   7. Computer dishonesty, including: tampering with or making unauthorized change to another person's or the university's computer system, illegally copying computer software, any use of another person's computer account, unauthorized activity involving another individual's personal computer system or any system belonging to the university, and other unauthorized use or violations involving computer use.
   8. Noncompliance: failure to follow through with sanction(s) imposed as a result of an academic violation.

C. **Procedures:** Charges of academic dishonesty may be brought by faculty members or administrators. Students who observe or become aware of an incident of academic dishonesty by another student are strongly encouraged to report it to a university official. *Sanction(s) may not be imposed upon a student believed to have engaged in academic dishonesty without following one of the processes outlined in this policy.*

   A faculty member or administrator who believes that a student has violated an academic policy may elect any of the following procedures to resolve the matter:

   1. **Option I: Informal Resolution**
      a. The faculty member or administrator and student may meet informally within five class days of the observation or discovery of the incident and agree to resolve the issue without submitting any formal documentation. It is recommended that the faculty member or administrator complete a statement that summarizes the conference which led to the resolution. This factual statement should be signed by both parties and copies provided to the student and the faculty member or administrator. If agreement cannot be reached, or at the discretion of the faculty member, a more formal process as outlined in this policy may be initiated.

2. **Option II: Resolution by Documented Agreement**
   a. The faculty member or administrator may schedule a conference with the student in an attempt to agree on the facts of the case and to reach a mutually agreeable resolution. This meeting must be scheduled/requested within five class days of the observation or discovery of the alleged violation or of the failure of resolution by Option I. If an agreement is reached, the faculty member or administrator must complete a Documented Agreement Form outlining the agreement and have it signed by both parties. Copies are distributed to the student, the faculty member or administrator filing the agreement, and the assistant to the vice president for Student Affairs. The form must be filed within five class days of the conference.
   b. Once the agreement has been reached and the form is filed, the matter is closed. **By signing off on the agreement, the student is waiving the right to appeal the sanctions agreed upon in the conference.** If the student fails to fulfill the written agreement, the faculty member or administrator may file an academic dishonesty referral against the student for noncompliance.
   c. If a documented agreement resolution is reached, no formal academic violation report is filed. If this is the student's first offense, the resolution agreement remains part of the student's internal university record and is maintained on file as indicated in the recordkeeping section of this policy *(See section F.2)*.
   d. If a documented agreement is not reached, the faculty member or administrator should initiate the formal adjudication process by filing an academic dishonesty referral form with the assistant to the vice president for Student Affairs within five class days of the conference with the student.
3. **Option III: Resolution by Formal Adjudication**
   A faculty member or administrator should pursue formal resolution of academic violations if:
   — he/she cannot reach or chooses not to attempt a mutually agreeable resolution with the student regarding the facts of the case or sanctions to be imposed.
   — he/she believes that suspension or expulsion is an appropriate sanction due to the severity of the violation, or
   — the faculty member or administrator is aware that the student has previously violated this policy.
   a. The faculty member or administrator should file an academic dishonesty referral form with the assistant to the vice president for Student Affairs within five class days of the observation or discovery of the violation, or within five class days of the documented agreement resolution conference if an agreement could not be reached. In any case, the referral must be filed no more than ten class days from the observation or discovery of the incident.
   b. This referral must describe in detail the alleged violation and the recommended sanctions if the student is found to have violated the policy. Upon receipt of the academic dishonesty referral, the assistant to the vice president for Student Affairs will review the allegation and determine if the student has a previous violation. If the student has no previous violation, the assistant to the vice president for Student Affairs will notify the student of the allegation and instruct him/her to follow the adjudication procedures outlined in this section (C.3). If the student does have a previous violation, the assistant to the vice president for Student Affairs will instruct the student to follow adjudication procedures outlined under the Multiple Violations section (D.3) of this policy.
   c. Within five class days of receiving notification of the allegation (first offense), the student must request that the department chair schedule a hearing to review the facts surrounding the allegation and recommended sanctions if the student is found to have committed a violation. This hearing will involve the student, the chair, and the faculty member; the chair may invite others if mutually agreeable. Guidelines for academic dishonesty hearings parallel those for judicial hearings found in the IUP judicial system policy. Refer to "General Guidelines for Judicial Hearings" in the judicial system information in the student handbook.
   d. If the student fails to contact the department chair within the five class days to schedule the hearing, the sanction recommended by the person filing the referral will automatically be imposed. If the student fails to appear when a hearing has been scheduled, the hearing will be held in the student's absence and the department chair will render a decision based upon factual information presented by the faculty member.
   e. Following the hearing, the department chair will render a decision based on the information presented at the hearing. Within five class days of the hearing, the department chair will forward a written report summarizing the hearing that includes the outcome, the factual basis for the decisions reached, the sanction(s) to be issued, and appeal procedures. Copies of this report will be sent to the student, the faculty member or administrator, and the assistant to the vice president for Student Affairs. The chair will retain a copy for departmental files.
   f. In the event that a chairperson cannot or will not fulfill the above role, or in the event that the person filing the referral is an administrator or department chair, the assistant to the vice president for Student Affairs will determine the appropriate individual to fulfill the chair's role and inform the student.

D. **Sanctions**
   1. The following sanctions may be agreed upon by the student and faculty member or administrator through informal resolution or documented agreement. They may also be imposed by the department chair, hearing officer, or the University Judicial Board through formal adjudication.
      a. **Single Grade Reduction:** Reduction of grade or failure on project, examination, quiz, or other academic exercise on which student is alleged to have cheated. (Requires the approval of the instructor of record.)
      b. **Course Grade Reduction:** Reduction of course grade or failure in the course. (Requires approval of the instructor of record.)
      c. **Constructive or Educational Task:** A task which requires the student to examine his/her dishonest behavior and which may benefit the student, campus, or community.
      d. **Letter of Warning:** A warning letter may be issued indicating that the student has been found in violation of an academic policy and that failure to comply with policies in the future may result in further disciplinary action to be handled as a second offense. The letter of warning will remain in effect for a period of time as specified by the individual or board hearing the case.
      e. **Disciplinary Probation:** Disciplinary probation, which is for a period of time specified by the individual or board hearing the case, is an indication that a student's status at the university is seriously jeopardized. During the probationary period, if the student is found in violation of another IUP policy, a more serious sanction will be levied, including possible suspension from the university.
      f. **Other:** Sanctions deemed appropriate and tailored to a specific violation as determined by the faculty member or administrator. Any reasonable sanction or combination of sanctions for a given violation may be agreed upon by the student and faculty member or administrator through informal resolution or documented agreement. They may also be imposed by the department chair, hearing officer, or the University Judicial Board through formal adjudication.
   2. **Suspension and Expulsion**
      The sanction of suspension can only be imposed on a student

through direct action of the University Judicial Board or by recommendation of the faculty member or administrator or department chair to the assistant to the vice president for Student Affairs. Expulsion can be *recommended* by a faculty member, department chair, or administrator but can only be imposed by the vice president for Student Affairs.

a. **Suspension:** A student may be suspended from the university for a specified period of time, not to be less than the remainder of the current semester. Suspension requires that a student remove him/herself from university premises, not attend classes or social activities, and not be present on university or Student Cooperative Association property during the period of suspension. Suspension can be recommended to the assistant to the vice president for Student Affairs by the department chair after the hearing with the student and faculty member or administrator or imposed by the University Judicial Board, a special interim board, or the vice president for Student Affairs.

b. **Expulsion:** Expulsion may be considered under any of the following circumstances: when there is a very serious violation of the academic integrity policy; when a student is proven to have violated the academic integrity policy on more than one occasion; or when a student appears before the board after already having been suspended. If expulsion is deemed the appropriate sanction by the department chair or administrator, by the University Judicial Board, or by the assistant to the vice president for Student Affairs, a recommendation may be made to the vice president for Student Affairs that the student be expelled from the institution. Expulsion from the institution is permanent.

3. **Multiple Violations**

a. Students found in violation of this policy through resolution by documented agreement or through formal adjudication will be informed by the assistant to the vice president for Student Affairs that subsequent violations may result in additional sanctions, including possible suspension or expulsion from the university.

b. If a student is found to have violated academic policies a second time, the assistant to the vice president for Student Affairs will notify the student that he/she will be required to appear before the University Judicial Board or special interim board. The faculty member or administrator who filed the second referral will be asked to present information concerning the alleged violation to the board.

c. The board will review all material and hear all the information pertinent to the second violation. If the student is found in violation of the policy a second time, the board will then review all material from the student's previous academic violation to determine appropriate sanction(s).

d. The student may appeal the decision or the sanction(s) to the vice president for Student Affairs using procedures outlined in the Appeals section (E. 1) of this policy. The vice president may deny or uphold the appeal or direct the appeal to be heard by a special interim board or the University Judicial Board.

E. **Appeals:** Cases of academic dishonesty that are resolved through informal resolution or documented agreement cannot be appealed, as the facts of the case, the decision, and sanction(s) have been agreed to by the student and the individual making the charge. These appeal procedures apply to cases resolved through formal adjudication.

1. If after receiving the department chair's report on the outcome of the hearing, the student disagrees with the decision, the sanction, or both, he/she may appeal to the vice president for Student Affairs within five class days of receiving the report. This appeal must be in writing and must describe in detail the grounds for the appeal. These reasons may include the following:
   a. Denial of a fair and reasonable hearing
   b. New evidence (applies when there is an acceptable reason why the information was not presented at the original hearing)
   c. Excessively harsh sanctions
2. If the student does not appeal within the five-class-day period, the recommended sanction will be automatically imposed. The faculty member may also appeal a decision of the department chair. The appeal procedures are the same as those previously outlined for the student.
3. The vice president for Student Affairs may deny or uphold the appeal or direct the appeal to be heard by a hearing officer, a special interim board, or the University Judicial Board. The hearing officer or the UJB may accept, modify, or reduce the recommended sanction.
4. Within five class days of the appeal hearing, the hearing officer/UJB must submit a written report of the decision to the student, faculty member, department chair, and the vice president for Student Affairs. The decision of the hearing officer/UJB is deemed final and will be implemented by the vice president for Student Affairs.
5. Appeals to the sanction of expulsion must be submitted to the Office of the President. If necessary, the president will consult with legal counsel in these cases.

F. **Records and Recordkeeping**

1. **Records of Informal Resolution**
   Although no official forms are filed at this level of resolution, it is strongly recommended that a faculty member or administrator who reaches an informal agreement with a student put the agreement in writing, give the student a copy, and keep a copy for his/her files.
2. **Records of Resolution by Documented Agreement**
   The records of documented agreement resolution forms are maintained by the assistant to the vice president for Student Affairs. They are not considered formal disciplinary records until and unless the student is found in violation of this policy a second time. They are internal university records used for monitoring students for multiple violations only. If a second documented agreement form is filed or a student is found in violation of the policy through formal adjudication, the student will then have a formal disciplinary record which includes records of both violations. This formal record is maintained according to the IUP judicial system recordkeeping policies.
3. **Records of Formal Adjudication**
   Records of academic dishonesty cases resolved through formal adjudication are kept on file in the Office of the Assistant to the Vice President for Student Affairs. They are maintained as formal disciplinary records in accordance with IUP judicial system recordkeeping policies.

G. **Operational Notes**

1. In cases where a violation is alleged at or near the end of the semester and resolution by informal resolution, documented agreement, or formal adjudication cannot be completed before grades are submitted, the faculty member should submit a grade of "Incomplete" (I) for the student. The "I" grade will remain on the student's record until the case has been resolved. Once the case has been resolved, the "I" grade will be replaced with the appropriate grade.
2. If the violation is alleged during the semester when classes are in session, the accused student should continue attending all classes and continue to complete course requirements during the resolution of the academic dishonesty case.
3. The assistant to the vice president for Student Affairs may extend any deadline which cannot be met for what he/she deems legitimate reason.

The various forms described in this policy are available from the assistant to the vice president for Student Affairs, 215A Sutton Hall, deans' offices, or from the department chairs. Questions concerning the Academic Integrity Policy can be directed to the assistant to the vice president for Student Affairs, 215A Sutton Hall.

*Approved University Senate 5/5/92*

# Requirements for Graduation

Undergraduate students at IUP may pursue programs of study in any one of the six undergraduate colleges: the Eberly College of Business, the College of Education, the College of Fine Arts, the College of Health and Human Services, the College of Humanities and Social Sciences, or the College of Natural Sciences and Mathematics. A student may earn the degree of Bachelor of Arts, Bachelor of Science, Bachelor of Fine Arts, or the Bachelor of Science in Education. To do so, the student must satisfy all of the degree requirements, which fall into three categories:

1) university requirements
2) college requirements
3) department requirements.

Requirements of the latter two categories may be found under the college and the department in which the student is pursuing a program of study.

University requirements for graduation in all curricula consist of Liberal Studies requirements, residency requirements in regard to awarding of degrees, and the semester-hour and cumulative quality-point average requirements.

**Exception:** Students who enrolled in a degree program prior to June 1, 1989, are not subject to Liberal Studies requirements; they will complete degree requirements including the General Education components outlined in earlier editions of the Undergraduate Catalog. Transfer students entering the university between June 1, 1989, and June 1, 1991, were assigned either to General Education or Liberal Studies at the time their transcripts were evaluated. All transfer students admitted after June 1, 1991, are subject to the Liberal Studies requirements.

A student may earn a second undergraduate degree by completing a minimum of thirty additional credits. (See Second Baccalaureate Degree.) It is not possible to receive two or more baccalaureate degrees simultaneously. However, a student may complete one or more secondary majors while earning the primary degree.

## Academic Life During the Freshman Year

During the Summer Orientation, as described in the section on orientation, students meet with faculty advisors to plan a program of courses for their first year. This careful planning considers students' individual preferences, the results of placement testing, and degree program requirements.

With a typical freshman academic schedule, students progress both in the universitywide Liberal Studies program and in their intended majors.

Three Liberal Studies courses are designed especially for freshmen, and all students are expected to complete these courses during their first year. The three are EN101 College Writing, HI195 History: The Modern Era, and one course from a list of Fine Arts selections.

College Writing enhances skills in written expression that are essential to success at the university. History: The Modern Era builds critical thinking skills and provides a foundation of knowledge for subsequent courses. Whichever fine arts course is chosen encourages an appreciative participation in campus cultural life.

Professors teaching these courses work cooperatively with each other and with Student Affairs Division staff to integrate class work with campus lectures and arts events. Study skills development and tutoring services are also provided as necessary.

## Semester Hour and Cumulative Quality-Point Average Requirement

Each student must complete a minimum of 124 semester hours to graduate, including 53 hours in Liberal Studies (all on a passing basis) and must have a 2.0 ("C" grade) cumulative quality-point average and a 2.0 ("C") average in his/her major and/or minor field.

## Liberal Studies

All students must fulfill the requirements of the university's Liberal Studies program. This involves a minimum of 53 semester hours divided among Learning Skills, Knowledge Areas, and Synthesis. The number of semester hours may rise slightly depending on student choices. Different colleges and sometimes departments within colleges may have specific variations as to how these Liberal Studies requirements are to be met.

Liberal Studies provides the broad vision and understanding that enable individuals to enjoy full, rich lives and to play constructive roles in their communities. The goals for Liberal Studies include (1) the development of important modes of thinking and intellectual skills: critical thinking, literacy, understanding numerical data, historical consciousness, scientific inquiry, ethical perception, and aesthetic sensitivity; (2) the acquisition of a body of knowledge or understanding essential to an educated person: and (3) an understanding of the physical, as well as the intellectual, nature of human beings.

### Liberal Studies Requirements

**Note:** Specific courses may be required or recommended by colleges or major departments: see degree program outlines for specifications.

Additional courses may be added to some categories during the next academic year; an updated listing is printed in each semester's schedule of undergraduate course offerings.

### Learning Skills: English Composition: Two Courses — 7sh

| | | |
|---|---|---|
| EN101 | College Writing | 4 |
| EN202 | Research Writing (sophomore standing) | 3 |

### Learning Skills: Mathematics: One Course from List — 3-4sh

| | | |
|---|---|---|
| MA101 | Foundations of Mathematics | 3 |
| MA102 | Finite Mathematics [inactive] | 3 |
| MA110 | Elementary Functions | 3 |
| MA121 | Calculus I for Natural and Social Sciences and Business | 4 |
| MA123 | Calculus I for Physics and Chemistry | 4 |
| MA127 | Calculus I | 4 |
| MA151 | Elements of Math I (restricted to designated majors) | 3 |
| MA152 | Elements of Math II (restricted to designated majors) | 3 |
| MA217 | Probability and Statistics | 3 |
| BE111 | Business Mathematics (restricted to designated majors) | 3 |

### Humanities: Three Courses* — 9sh

*One course in history, one in literature, and one in philosophy or religious studies.

**History:**

| | | |
|---|---|---|
| HI195 | History: The Modern Era | 3 |

**Literature:**

| | | |
|---|---|---|
| EN121 | Humanities: Literature | 3 |
| FL121 | Humanities: Literature (taught in English) | 3 |
| EN210 | Literary Analysis (English and Communication majors) | 3 |

**Philosophy or Religious Studies:**

| | | |
|---|---|---|
| PH101 | Informal Logic: Methods of Critical Thinking | 3 |
| PH120 | Introduction to Philosophy | 3 |
| PH221 | Introduction to Symbolic Logic | 3 |
| PH222 | Ethics | 3 |
| PH223 | Philosophy of Art | 3 |
| RS100 | Introduction to Religion | 3 |
| RS110 | World Religions | 3 |
| RS250 | Understanding the Bible | 3 |
| RS290 | Christianity | 3 |

### Fine Arts: One Course from List — 3sh

| | | |
|---|---|---|
| AH101 | Introduction to Art | 3 |
| MH101 | Introduction to Music | 3 |
| TH101 | Introduction to Theater | 3 |
| TH102 | Introduction to Dance | 3 |

### Natural Science: One Option — 8-10sh

**Option I: Two-semester Laboratory Course Sequence — 8sh**

Two courses with laboratories (4sh each), paired together in a sequence, from the natural science laboratory course list.

**Natural Science Laboratory Sequences:**

| | |
|---|---|
| BI103 and 104 General Biology I and II | 8 |
| CH101 and 102 College Chemistry I and II | 8 |
| CH111 and 112 General Chemistry I and II | 8 |
| CH113 and 114 Concepts in Chemistry and Basic Inorganic Chemistry | 8 |

**Two of the following three, in any order:**

| | | |
|---|---|---|
| GS101/102 | The Dynamic Earth with lab | 4 |
| GS103/104 | Oceans and Atmospheres with lab | 4 |
| GS105/106 | Exploring the Universe with lab | 4 |
| GS111/112 | Earth Science for Educators I with lab and | |
| GS113/114 | Earth Science for Educators II with lab | 8 |
| GS121/122 | Physical Geology with lab and | |
| GS131/132 | Historical Geology with lab | 8 |
| PY111/121 and 112/122 | Physics I and II with labs | 8 |
| PY131/141 and 132/142 | Physics I and II with labs (calculus) | 8 |
| SC105 and 106 | Physical Science I and II (either order) | 8 |

**Option II: One Laboratory plus Two Nonlaboratory Courses — 10sh**

One course with laboratory (4sh) from the natural science laboratory course list followed by two courses (3sh each) from natural science nonlaboratory course list. One of the nonlaboratory courses may be counted again among the Liberal Studies Electives.

**Natural Science Laboratory Courses:**

| | | |
|---|---|---|
| BI103 | General Biology I | 4 |
| CH101 | College Chemistry I | 4 |
| CH111 | General Chemistry I | 4 |
| CH113 | Concepts in Chemistry | 4 |
| GS101/102 | The Dynamic Earth with lab | 4 |
| GS103/104 | Oceans and Atmospheres with lab | 4 |
| GS105/106 | Exploring the Universe with lab | 4 |
| GS111/112 | Earth Science for Educators I with lab | 4 |
| GS113/114 | Earth Science for Educators II with lab | 4 |
| GS121/122 | Physical Geology with lab | 4 |
| GS131/132 | Historical Geology with lab | 4 |
| PY111/121 | Physics I | 4 |
| PY131/141 | Physics I (calculus) | 4 |
| PY151/161 | Medical Physics | 4 |
| SC105 | Physical Science I | 4 |
| SC106 | Physical Science II | 4 |

**Natural Science Nonlaboratory Courses:**

| | | |
|---|---|---|
| BI114 | Environmental Science | 3 |
| BI115 | Biotic Diversity of North America | 3 |
| GS101 | The Dynamic Earth | 3 |
| GS103 | Oceans and Atmospheres | 3 |
| GS105 | Exploring the Universe | 3 |
| GS111 | Earth Science for Educators I | 3 |
| GS113 | Earth Science for Educators II | 3 |
| GS121 | Physical Geology | 3 |
| GS131 | Historical Geology | 3 |
| GS141 | Introduction to Ocean Science | 3 |
| GS150 | Geology of National Parks | 3 |
| GS151 | The Age of Dinosaurs | 3 |
| GS221 | Physical Resources of the Earth | 3 |
| PY101 | Energy and the Environment | 3 |
| PY111 | Physics I | 3 |
| PY112 | Physics II | 3 |
| PY131 | Physics I (calculus) | 3 |
| PY132 | Physics II (calculus) | 3 |
| PY151 | Medical Physics | 3 |

### Social Sciences: Three Courses from List* — 9sh

*No course prefix may be used more than once

| | | |
|---|---|---|
| AN110 | Contemporary Anthropology (1) | 3 |
| AN211 | Cultural Anthropology (1) | 3 |
| AN213 | World Archaeology | 3 |
| CR101 | Crime and Justice Systems | 3 |
| EC101 | Basic Economics | 3 |
| EC121 | Principles of Economics I | 3 |

| | | |
|---|---|---|
| GE101 | Intro to Geography: Human Environment Interaction | 3 |
| GE102 | Geography of U.S. and Canada | 3 |
| GE104 | Geography of Non-Western World (1) | 3 |
| PS101 | World Politics (1) | 3 |
| PS111 | American Politics | 3 |
| PC101 | General Psychology | 3 |
| SO151 | Principles of Sociology | 3 |
| SO231 | Contemporary Social Problems | 3 |

(1) Also fulfills requirement for non-Western course

### Health and Wellness: One Course 3sh

| | | |
|---|---|---|
| HP143 | Health and Wellness | 3 |
| FN143 | Nutrition and Wellness | 3 |

An alternate method of fulfilling this requirement is the completion of one year of Military Science/ROTC: MS101 American Military History (1650-1920) and Lab (2sh) and MS102 American Military History (1920-present) and Lab (2sh). The courses MS203 and 204 may be substituted for MS101 and 102. Veterans are given four credits toward these requirements by validating two years' active duty via form DD214.

### Liberal Studies Electives: Three Courses from List* 9sh

*At least one course must be numbered 200 or higher
*No course carrying the student's major prefix may be used
*No course prefix may be used more than once, except for intermediate-level foreign language prefixes (FR, GM, SP, LA, and GK) which may be used twice.

See list of nonlaboratory natural sciences for additional courses which may be used as Liberal Studies electives.

See list of Non-Western Cultures courses, some of which may be used as Liberal Studies Electives.

**The following courses are also approved:**

| | | |
|---|---|---|
| AH205 | Ancient to Medieval Art | 3 |
| AH206 | Renaissance to Baroque Art | 3 |
| AH211 | Modern Art | 3 |
| AH222 | Art in America | 3 |
| AN286 | Marriage, Kinship, and the Family [same as SO286] | 3 |
| BE101 | Microbased Computer Literacy (identical to CO101, IM101) | 3 |
| BE201 | Internet and Multimedia (identical to CM/CO/IM/LB 201) | 3 |
| CM101 | Communications Media in American Society | 3 |
| CM201 | Internet and Multimedia (identical to BE/CO/IM/LB 201) | 3 |
| CM380 | History of African Americans in Film and TV | 3 |
| CO101 | Microbased Computer Literacy (identical to BE101, IM101) | 3 |
| CO201 | Internet and Multimedia (identical to BE/CM/IM/LB 201) | 3 |
| CS101 | Personal and Family Management | 3 |
| CS315 | Consumer Economics and Family Finance | 3 |
| EC122 | Principles of Economics II | 3 |
| EN349 | English Bible as Literature | 3 |
| FN145 | Introduction to Nutrition | 3 |
| FR201 | College French I (2) | 3 |
| FR202 | College French II (2) | 3 |
| FR203 | Accelerated College French | 6 |
| FR301 | Portraits of Women in French Novels | 3 |
| GE230 | Cultural Geography | 3 |
| GE231 | Economic Geography | 3 |
| GE251 | Geography of Pennsylvania | 3 |
| GE253 | Geography of Europe | 3 |
| GM251 | German III (2) | 3 |
| GM252 | German IV (2) | 3 |
| HE218 | Child Development | 3 |
| HE224 | Marriage and Family Relations | 3 |
| HI210 | Ancient Civilizations of Mediterranean and Near East | 3 |
| HI212 | Ancient and Medieval Europe | 3 |
| HI214 | Themes in American History | 3 |
| HI305 | Renaissance and Reformation | 3 |
| HI355 | African History I (Antiquity to 1600) | 3 |
| HI363 | Thought and Culture in Early America | 3 |
| HI364 | Thought and Culture in Modern America | 3 |
| HI366 | African-American Women | 3 |
| IM101 | Microbased Computer Literacy (identical to BE101, CO101) | 3 |
| IM201 | Internet and Multimedia (identical to BE/CM/CO/LB 201) | 3 |
| JN250 | Women and the Press | 3 |
| JN375 | World News Coverage | 3 |
| LA102 | Elementary Latin II | 4 |
| LA201 | Intermediate Latin (2) | 4 |
| LB201 | Internet and Multimedia (identical to BE/CM/CO/IM 201) | 3 |
| MA121 | Calculus I (1) | 4 |
| MA122 | Calculus II | 4 |
| MA123 | Calculus I (1) | 4 |
| MA124 | Calculus II | 4 |
| MA152 | Elements of Mathematics II (1) (specified majors only) | 3 |
| MA214 | Probability and Statistics | 3 |
| MA216 | Probability and Statistics | 4 |
| MA217 | Probability and Statistics (1) | 3 |
| MA241 | Differential Equations | 3 |
| MH301 | Music History I | 3 |
| MH302 | Music History II | 3 |
| PC310 | Development Psychology | 3 |
| PC321 | Abnormal Psychology | 3 |
| PC330 | Social Psychology | 3 |
| PC378 | Death and Dying | 3 |
| PH232 | Philosophical Perspectives on Love and Marriage | 3 |
| PH321 | Symbolic Logic II | 3 |
| PH323 | Political Philosophy | 3 |
| PH324 | History of Philosophy I | 3 |
| PH325 | History of Philosophy II | 3 |
| PH326 | Phenomenology and Existentialism | 3 |
| PH330 | Philosophy of Science | 3 |
| PH400 | Ethics and Public Policy | 3 |
| PH405 | Justice and Human Rights | 3 |
| PH420 | Metaphysics | 3 |
| PH421 | Theory of Knowledge | 3 |
| PH450 | Philosophy of Law | 3 |
| PH460 | Philosophy of Language | 3 |
| PS346 | Political Sociology | 3 |
| RS200 | Religion and Culture | 3 |
| RS210 | World Scriptures | 3 |
| RS260 | American Religious Development | 3 |
| RS312 | Archaeology and the Bible | 3 |
| RS329 | Philosophy of Religion | 3 |
| RS410 | History of Christian Thought I | 3 |
| RS440 | History of Christian Thought II | 3 |
| SO286 | Marriage, Kinship, and the Family [same as AN286] | 3 |
| SO337 | World Societies and World Systems | 3 |
| SO340 | Sociology of Industry | 3 |
| SO362 | Racial and Ethnic Minorities | 3 |
| SO363 | Sociology of Sex and Gender | 3 |
| SO445 | Social Stratification | 3 |
| SO458 | Political Sociology [same as PS346 Political Sociology] | 3 |
| SP102 | Elementary Spanish II | 4 |
| SP122 | Spanish for Health Care Professionals II | 3 |
| SP132 | Spanish for Hospitality Industry II | 3 |
| SP201 | Intermediate Spanish (2) | 4 |
| SP211 | Intensive Intermediate Spanish [formerly SP201] | 6 |

(1) Students may use this course to fulfill either the Learning Skills: Mathematics requirement or a Liberal Studies Elective requirement, but not both.

(2) Higher-level language courses may be substituted by students demonstrating such ability on placement tests.

### Non-Western Cultures: One Course from List 3sh*

*Students must fulfill this requirement by completing one course from the list; most of these courses will at the same time fulfill other requirements set by Liberal Studies or in some cases by a college or department.

**Also fulfills LS Social Science requirement:**

| | | |
|---|---|---|
| AN110 | Contemporary Anthropology | 3 |
| AN211 | Cultural Anthropology | 3 |
| GE104 | Geography of Non-Western World | 3 |
| PS101 | World Politics | 3 |

**Also fulfills LS Elective requirement:**

| | | |
|---|---|---|
| AN271 | Cultural Area Studies: Africa [same as SO271] | 3 |
| AN272 | Cultural Area Studies: China [same as SO272] | 3 |
| AN273 | Cultural Area Studies: Southeast Asia [same as SO273] | 3 |
| AN274 | Cultural Area Studies: Latin America [same as SO274] | 3 |
| AN314 | Native Americans [same as SO314] | 3 |
| AN350 | Anthropology of Women | 3 |
| AN365 | Native North American Religions [same as RS365] | 3 |
| CM230 | Issues in International Communication | 3 |
| EC350 | Comparative Economic Systems | 3 |
| GE252 | Geography of Latin America | 3 |
| GE254 | Geography of Russia and the Soviet Sphere | 3 |
| GE255 | Geography of Africa | 3 |
| GE256 | Geography of East Asia | 3 |
| GE257 | Geography of South and Southeast Asia | 3 |
| HI327 | Soviet Union and Contemporary Russia | 3 |
| HI330 | History of the Islamic Civilization | 3 |
| HI331 | Modern Middle East | 3 |
| HI356 | African History II (1600 to present) | 3 |
| HI367 | Native American History | 3 |
| IS281 | Special Topics in Non-Western Studies | 3 |
| PS382 | Political Systems: Africa | 3 |
| PS387 | Political Systems: Latin America | 3 |
| PS389 | Developing Nations | 3 |
| RS311 | Eastern Philosophy | 3 |
| RS360 | African Religions | 3 |
| RS365 | Native North American Religions [same as AN365] | 3 |
| RS370 | Religions of China and Japan | 3 |
| RS375 | Religions of India | 3 |
| RS380 | Islam | 3 |
| SO271 | Cultural Area Studies: Africa [same as AN271] | 3 |
| SO272 | Cultural Area Studies: China [same as AN272] | 3 |
| SO273 | Cultural Area Studies: Southeast Asia [same as AN273] | 3 |
| SO274 | Cultural Area Studies: Latin America [same as AN274] | 3 |
| SO314 | Native Americans [same as AN314] | 3 |
| SP244 | Modern Mexico | 3 |
| SP344 | 20th Century Spanish American Culture and Civilization [taught in Spanish] | 3 |
| SP364 | Survey of Spanish American Literature [taught in Spanish] | 3 |

**Fulfills LS Non-Western requirement only:**

| | | |
|---|---|---|
| CL151, 201, or 251 | Arabic II, III, or IV | 3 |
| CL152, 202, or 252 | Chinese II, III, or IV | 3 |
| CL155, 205, or 255 | Hindi II, III, or IV | 3 |
| CL156, 206, or 256 | Hungarian II, III, or IV | 3 |
| CL158, 208, or 258 | Japanese II, III, or IV | 3 |
| CL159, 209, or 259 | Korean II, III, or IV | 3 |
| CL162, 212, or 262 | Russian II, III, or IV | 3 |
| EC339 | Economic Development I | 3 |

Certain Study Abroad programs in non-Western culture areas are offered (information is in the respective catalog section; further information is available in the Office of International Services).

### Synthesis: One Course 3sh

LS 499 Senior Synthesis (required of all students) 3
**Prerequisite:** 73 or more semester hours earned

This course helps students understand and handle complex intellectual and social issues from multiple perspectives. A selection of topics is available each semester and summer session. Students should schedule the course during the senior year, or at least no earlier than the last half of the junior year. In order to broaden their experiences, students are encouraged to enroll in synthesis sections taught by instructors outside of the students' major fields.

### Writing Across the Curriculum: Minimum of Two "W" Courses

All students must include among the total courses required for graduation a minimum of two designated writing-intensive courses. One of these courses must be in the student's primary major; the other(s) may be in Liberal Studies, college or major requirements, or free electives. Such courses, which involve extensive use of writing as part of the learning experience, are identified with a /W/ in each semester's Schedule of Undergraduate Course Offerings.

### Eligibility and Application for Graduation

Commencement ceremonies are in May at IUP at the conclusion of the spring semester and in December at the conclusion of the fall semester. Only students who have completed all requirements for graduation by the end of the semester are eligible to participate in the commencement exercises. Students who have withdrawn from courses or have elected to take incompletes or have failed courses during the semester and thus have not met the requirements for graduation may not participate in commencement exercises until those requirements have been fulfilled. Students completing requirements in August or December are included on the graduation list for the December graduation.

Students are responsible for knowing and fulfilling the requirements for graduation in their degree program. It is the student's responsibility to complete a form to apply for graduation and submit it to the office of the dean of his/her college early in the term prior to graduation.

Certification for graduation is not final until approved by the dean of the college in which the student is enrolled. Diplomas will not be issued until all bills and obligations have been satisfied, including the degree fee, and final certification for graduation has been issued by the student's college dean.

### Pre-Approval for Transfer Coursework

Students enrolled at IUP who wish to take coursework at another institution (either during the summer or regular semesters) must complete an Application for Coursework Outside IUP prior to taking the course(s). Only the credits from the course(s) transfer, not the grade; therefore, students cannot use outside coursework for IUP's repeat policy. Only the credits for which students receive the grade of A, B, or C will transfer. If P/F is the only grading option available, there must be a narrative evaluation from the faculty member certifying that the work was of C level or better. No more than sixty credits total may be earned at a junior or community college for application toward an IUP degree. If the courses are being taken within the student's last thirty credits, the courses must be taken at IUP unless the student's residency requirement for awarding of degrees is waived by the college dean. Courses without prior approval are taken at the risk of the student; there is no obligation on the part of any officer of this university to accept or transfer such credit.

Forms for approval of off-campus coursework are available in the Office of Transfer Credit Evaluation/Admissions Office. Full directions on the form outline the steps involving the transfer evaluation, student's advisor, and college dean, or designee. After completing off-campus coursework, students should have the institution at which the work was taken send a final official transcript directly to Transfer Evaluation Services, 216 Pratt Hall, IUP, Indiana, PA 15705. Copies of transcripts issued to or hand carried by students will not be accepted.

### Residency Requirement for Awarding of Degrees

All students receiving an initial IUP baccalaureate degree are required to complete 45 semester hours in IUP courses. At least 15 semester hours in IUP courses are required to fulfill an IUP major and a minimum of six semester hours for a minor. Normally, the student will complete the final 30 semester hours in residence in IUP courses, unless specific approval has been secured from the dean of the student's college. Exception to the above requirements for courses to be earned in residence at IUP may be granted by the college deans based upon the appropriateness and academic integrity of the courses in question. This approval is generally sought as part of the process for prior approval of off-campus coursework.

### Non-Native Students: English Language Requirements

Non-native students of English, either international students or those from the U.S. for whom English is not their first learned language, are required to take an ESL Screening/Placement Test prior to registration in the first semester attending IUP. The test is administered prior to registration in both the fall and spring semesters. Results of this test are used to determine for which English course (EN100/ESL, EN101/ESL, EN202/ESL, EN121/ESL) a newly admitted non-native student must register. In addition, any currently enrolled non-native student can take the regularly scheduled test to determine registration for non-ESL English courses. For further information, contact Chair, English Department, 412-357-2261.

### Program Changes

To insure their quality and relevance, academic programs at IUP are subject to review and change by duly appointed and responsible university groups. Because of this, the university recognizes that provisions must be made to prevent hardship to students already enrolled in programs if changes later occur in specific or general program requirements. Students affected by changes in programs, policies, and regulations are therefore given the option of following those requirements that are in effect when the student was first enrolled in the program or those in effect at the time of expected graduation. The student cannot, of course, combine chosen elements of the two. Should a question of rule interpretation arise with respect to changes, the student, the student's advisor, or both should petition the college dean for a decision about which requirements apply.

### Timely Completion of Degree Requirements

The minimum total semester hour requirement for a baccalaureate degree at IUP is 124. Students who enroll in degree programs that require more than 124, or who seek the added benefit of a double major, minor, or specialized program, or who change majors should plan their sequence of courses carefully with an advisor. Such students should be alert to the possibility that they may need to carry a heavier than average class load in order to complete the degree in eight semesters. In some situations, summer work or an extra semester may be necessary. The need to enroll in remedial or other preparatory coursework or to repeat courses may also affect progress toward a degree.

### Undergraduate Catalog Applicability Time Frame

The university reserves the right to modify degree requirements through established governance channels. However, the general policy has been established that the following time frame regulations form the basis for application of the university's undergraduate degree requirements:

1. A student who has been in continuous registration (fall and spring semesters) or who has interruption(s) of less than two calendar years is governed by the requirements outlined in the catalog in effect at the time of entrance into a degree program (major).
   a. A student who changes major will be governed by the requirements of the major and/or college at the time of acceptance into the new major, without change of Liberal Studies requirements except as specified by the new major.
   b. A student entering through the nondegree program is governed by the requirements in effect at the time degree candidacy is awarded.
   c. A part-time student may be covered by these provisions of continuous registration to a maximum of ten years.
2. A student whose education is interrupted by two or more calendar years will be governed by the requirements in effect at the time of readmission to the university. The readmission may carry specific requirements/substitutions necessary to provide for program integrity.
3. The applicability of coursework completed more than ten years prior to the degree date is subject to review by the dean or designee for evaluation on a course-by-course basis.

# Academic Affairs Division Areas

**Mark J. Staszkiewicz**, Provost
**Mark J. Piwinsky**, Associate Provost for Academic Administration
**Ronald P. Maggiore**, Associate Provost for Enrollment Management and Planning
**Yvonne B. Redd**, Assistant to the Provost

The Academic Affairs areas below provide instruction in several disciplines that are not specific to one of the university's distinct colleges. They offer services and instruction under the direction of the Provost's Office.

## The University Libraries

**Larry A. Kroah, Director; Ronald A. Steiner, Chairperson; Brown, Connell, Glenn, Grassinger, Hooks, Janicki, Jen, Joseph, Kaufman, Kirby, Knupp, Laude, Lucas, McDevitt, Rahkonen, Shively, Zorich; and professors emeriti Chamberlin, Lafranchi, Scheeren, Snead, Wolf**

The Libraries and Media Resources Department serves the informational and research needs of students and faculty by providing a wide variety of academic resources which include books, periodicals, micro materials, media, and computer data base services. The Library is committed to providing greater access to an ever-increasing volume of information, using such advancements as interactive video, satellite teleconferencing, microcomputer-based technologies, and a state-of-the-art online public access catalog, in addition to more traditional means.

The Library faculty offers individual and group assistance in using the Library's resources. Library services include access to both local and national data bases, media equipment and production support, and classes in bibliographic instruction.

The Library faculty offers a one-credit course in the use of libraries, LB151: Introduction to Library Resources.

## Robert E. Cook Honors College

**Janet E. Goebel, Director**

The Robert E. Cook Honors College enrolled its first freshman students for the 1996 fall semester. The college provides a challenging opportunity for academic and personal development through an integrated program of curriculum, residence, and cocurricular activities.

The faculty is drawn from the disciplines of history, English composition, philosophy, and fine arts to lead an integrated multidisciplinary approach. The Honors Core meeting daily spans the first three semesters; other honors courses, including some specific to departments, are being developed for later semesters.

Whitmyre Hall has been renovated into a combined honors residential/academic facility.

Applicants who may be interested in further information are invited to contact the university Admissions Office at 412-357-2230 or 1-800-442-6830 or the office of the Honors College in Whitmyre Hall at 412-357-4971.

## Military Science

**LTC Joseph A. Bukartek, Jr., Chairperson; CPT Bryan R. Thom, CPT Aaron A. Williams, SGM Garland Hill, SFC Richard B. Bouch, SFC Rafael U. Ortiz, SFC Fololc F. Salanoa, SSG Ronald W. Quinlan, Mrs. Donna S. Rankin**

IUP is an authorized Senior Reserve Officers' Training Corps (ROTC) unit. The ROTC program offers to both men and women the opportunity to learn and practice leadership and managerial techniques that will prove beneficial to all life's future endeavors; to obtain credits which count toward graduation; and, to those who choose to complete the total program, to obtain a commission as a second lieutenant in the U.S. Army.

Regular ROTC classes for two semesters satisfy the mandatory Liberal Studies requirement for Health and Wellness classes.

### Enrollment

The program is divided into two phases: the Basic Course (freshman and sophomore years) and the Advanced Course (junior and senior years).

### Regular Basic Course

The first two years of military science provide a background of the historical role of military forces as well as current national military objectives. In addition, basic leadership is developed and certain skills are taught, such as adventure training, survival training, map reading, self-defense, rappelling, and marksmanship. Enrollment in any of the freshman- or sophomore-level ROTC courses (MS101, 102, 203, or 204) in no way obligates or commits the student to any military service or any further ROTC courses. These courses are offered on the same basis as other academic courses at IUP with the privilege of withdrawing at any time.

### Advanced Course

The last two years constitute the Advanced Course of instruction for men and women who desire a commission as a second lieutenant in the United States Army. This phase is composed of studies in advanced leadership and management, tactics, military law, and psychological, physiological, and social factors which affect human behavior. Modern instructional and training techniques are also covered. Practical application is the rule, and students have the opportunity to practice and polish their skills. Participation in the Advanced Course will earn the student approximately $3,500, between $150-a-month subsistence and pay for summer camp ($3,000 is not taxable). For continuation in ROTC during the junior and senior years, the student must have a 2.0 grade-point average in the student's academic area, have successfully completed requirements for the ROTC Basic Course, pass a physical examination, and be accepted by the Professor of Military Science. The U.S. Army requirements for commissioning include a course in written communications, in human behavior, and in military history. IUP students normally fulfill these requirements with EN101, EN202, and HI281 and with a course in psychology, anthropology, sociology, or certain major courses in human behavior. Advanced course students must agree in writing to complete the junior and senior years, since they will receive $150-a-month subsistence during these academic years.

### Requirements for Enrollment

The general requirements for enrollment in Advanced ROTC are that the student be accepted by the university as a regular enrolled student, be a citizen of the United States, be physically qualified, and be not less than seventeen years of age but less than thirty at anticipated graduation date. Veterans and Junior ROTC and Civil Air Patrol graduates may receive exemption from the ROTC Basic Course as approved by the Professor of Military Science.

### What ROTC Offers

Equipment, ROTC textbooks, and uniforms are issued without cost to enrolled students.

Credit is given for successful completion of the 3-semester-hour Health and Wellness Liberal Studies requirement for graduation.

Students formally enrolled in the Advanced Course (MS305, 306, 407, and 408) are paid a subsistence allowance ($150 a month) during the academic year.

Training is given in other practical skills such as self-defense, adventure training, rappelling, marksmanship, orienteering, first aid techniques, and water safety.

Opportunities are available to examine the military profession in detail. This includes the Regular Army, National Guard, and Army Reserve.

If students so desire and are accepted into the Advanced Course, they will receive commissions as second lieutenants upon graduation from the university and serve either three years' continuous active duty or two to three months' active duty for training, with the remaining obligation served in the Army Reserve or National Guard.

### Program in Military Science

| | | | |
|---|---|---|---|
| **Required courses:** | | | **20** |
| MS101 | Introduction to Military Science | 2sh (1) | |
| MS102 | Fundamentals of Military Science | 2sh (1) | |
| MS203 | Fundamentals of Tactical Operations, Techniques of Leadership, and Weapons Characteristics | 2sh (2) | |
| MS204 | National Security and Fundamentals of Military Topography | 2sh (2) | |
| MS305 | Fundamentals of Leadership and Modern Learning/Teaching Relationship | 3sh | |
| MS306 | Study of Advanced Leader Planning and Execution of Modern Combat Operations | 3sh | |
| MS407 | Management of the Military Complex to Include Fundamentals of Military and International Law | 3sh | |
| MS408 | Seminar in Military Analysis and Management | 3sh | |

(1) MS101-102 may substitute for the Liberal Studies requirement in Health and Wellness.
(2) MS203-204 are available as free electives to all students without any military obligation.

## Women's Studies Program

**Maureen C. McHugh, Director; Thompson**

The Women's Studies minor is designed to examine the status and experiences of women from a multidisciplinary perspective. The courses use a variety of methods and disciplinary perspectives to explore the impact of gender on the experiences of the individual. Women's contributions to a variety of fields and the historical, literary, and cultural images of women are also addressed. Students are encouraged to challenge traditional theories and research regarding women and to develop a critical, multidisciplinary, multicultural, and gendered view of the world. Courses taught within the minor typically involve the students through innovative, experiential classroom exercises and written assignments. Courses in Women's Studies address social equity issues and encourage students to perceive themselves as capable of transforming society.

A minor in Women's Studies indicates to the prospective employer an awareness of and sensitivity to gender issues. This awareness may be needed in the following positions: personnel specialist, affirmative action officer, crisis intervention specialist, family and youth services provider, legal advocate. A minor in Women's Studies can contribute to success in a variety of fields including communication, counseling, criminology, education, health, journalism, law, politics, psychology, and applied sociology.

### Minor - Women's Studies

| | | | |
|---|---|---|---|
| **Required course:** | | | **3** |
| WS200 | Introduction to Women's Studies | 3sh | |
| **Students receive approval for a specified course of study from the following list of courses:** | | | **12** |
| AN350 | Anthropology of Women | 3sh | |
| CR390 | Women and Crime | 3sh | |
| EN336 | Language, Gender, and Society | 3sh | |
| EN384 | Introduction to Literature by Women | 3sh | |
| FR301 | Portraits of Women in the French Novel | 3sh | |
| HI369 | Women in America | 3sh | |
| HI390 | History of Women—World Cultures | 3sh | |
| HP430 | The American Woman and Sport | 3sh | |
| JN250 | Women and the Press | 3sh | |
| PC379 | Psychology of Human Sexuality | 3sh | |
| PC411 | Psychology of Women | 3sh | |
| PH232 | Philosophical Perspectives on Love, Marriage, and Divorce | 3sh | |

| | | |
|---|---|---|
| SO363 | Sociology of Sex and Gender | 3sh |
| SO427 | Spouse Abuse | 3sh |
| WS482 | Independent Study | var-1-3sh |
| XX481 | Special Topics (1) (offered within department) | var-1-3sh |
| XX493 | Internship (2) | var-1-3sh |

(1) Examples of XX481 offered: AR481 Maidens to Madonna, BE481 Women and Business, RS481 Women and Religion, WS481 Special Topics in Women's Studies

(2) Internships (up to three credits) may be counted towards the minor.

## Office of International Affairs

**Laila S. Dahan, Director**
**Patrick A. Carone, Foreign Student Advisor**

The Office of International Affairs (OIA) provides the leadership for Indiana University of Pennsylvania's involvement in a wide range of international activities.

The OIA is a central source of information which provides special services for admitted international students, visiting scholars, and international visitors and faculty. The office provides the following services to students:

- an extensive orientation program for new international students
- advising on immigration matters
- counseling on cultural and personal matters
- preparation and processing of immigration documents
- medical insurance information for international students and exchange/study abroad participants
- financial assistance to qualified students through the partial tuition waiver
- a predeparture orientation program for exchange and study abroad participants
- a reentry program for participants returning from exchange or study abroad

In addition, this office services the International Student Club, which links students to the larger community. The club provides an opportunity for international students to share their perspectives and cultural traditions with others in the university and in the community. The office also sponsors monthly coffee hours open to the university. Trips for international and exchange students to Niagara Falls and Washington, D.C., are arranged and partially funded through OIA.

### International Exchange and Study Abroad Programs

Through the OIA, IUP students may broaden their education by taking part in study abroad programs. The university administers some of these programs directly, while others are conducted in cooperation with the International Student Exchange Program (ISEP).

The office houses an exchange/study abroad resource library. Students seeking information on academic programs offered by educational institutions in this country and abroad are welcome to read the materials available in the office. Qualified students planning to travel or study abroad may also purchase the International Student Identity Card—good for discounts, identification, and insurance—in the Office of International Affairs.

More information about each of the following programs and programs instituted after the date of this publication can be obtained in the Office of International Affairs, 343 Sutton Hall, 412-357-2295.

**Colombia, Bogota.** Students with Spanish fluency interested in Colombian culture have the opportunity to study for one semester or an academic year at the Universidad de Los Andes. Courses are offered in business and social science.

**Costa Rica, Heredia.** A four-week intensive Spanish language program is offered in the summer at the National University of Costa Rica. For details and brochures, contact the Department of Spanish and Classical Languages.

**Egypt, Cairo.** Students majoring in education, language, commerce, the arts and sciences, and the humanities and social sciences may study for a semester or an academic year at Ain Shams University. The language of instruction is English.

**England, Bristol.** Students wishing to enroll in courses in the areas of economics, politics, sociology, history, and European social studies may study during the fall semester at the University of the West of England, Bristol.

**England, Greenwich.** Students studying teacher education for preparation as elementary, early childhood, or physical education teachers are eligible to study at the University of Greenwich for one semester. (Some secondary certification programs are available.)

**England, Oxford.** A three-week educational and cross-cultural experience is offered in the summer at Oxford University.

**England, Sheffield.** Students studying business have the opportunity to study for a semester or academic year at Sheffield Hallam University. Interest in other academic areas may be explored.

**England, Worcester.** Students are offered an opportunity to study at Worcester College of Higher Education for one semester or an academic year. Courses are offered in a variety of fields of study.

**Finland, Tampere.** Students studying business or occupational safety are eligible to study at Tampere University of Technology for a semester or academic year. The language of instruction is English.

**France, Nancy.** The opportunity to study for one semester or academic year at the University of Nancy II (140 miles from Paris) is available to qualified students. The language of instruction is French. For details, contact the French Department.

**France, Nancy** (summer). Two programs, one for English-speaking and one for French-speaking participants, are offered in the summer.

**Germany, Duisburg.** A semester or academic year program at the University of Duisburg is available to qualified students who possess the required German language competency. Courses are offered in German language, literature, culture, business, and natural sciences. The language of instruction is German. For further information, contact the German Department.

**Hungary, Pecs.** Students interested in Hungarian culture have the opportunity to study abroad for a semester or academic year at Janus Pannonius University. Courses are offered in the following areas: History of East-Central Europe, Political Development, Economic Reform, Social Change, Arts and Culture, and Central European Studies. The language of instruction is English.

**Japan, Hirikata.** The opportunity to study for a semester or one academic year at Kansai Gaidai University is available to students interested in Japanese culture. A variety of courses are offered in the Asian Studies Program. The language of instruction is English.

**Jordan, Amman.** Students interested in Jordanian culture have the opportunity to study for a semester or an academic year at the University of Jordan. Courses are offered in business management, accounting, nursing, language, education, and humanities.

**Jordan, Irbid.** Students interested in Jordanian culture may also study at Yarmouk University for a semester or academic year or may take intensive Arabic courses during the summer. Courses are offered in Arabic language, business, and political science.

**Mexico, Cuernavaca.** Students who are studying Spanish and have an interest in experiencing Mexican culture have an opportunity to participate in a summer study program that is offered at the Center for Bilingual and Multicultural Studies, an affiliate of the University of Morelos. For details and brochures, contact the Department of Spanish and Classical Languages.

**Mexico, Puebla.** Students wishing to enroll in courses in Spanish, business, international relations/studies, anthropology, and hotel and restaurant management with an interest in Mexican culture have the opportunity to study at the Universidad de las Americas, Puebla, for one semester or academic year. The language of instruction is Spanish.

**Russian Federation, Ossetia.** Students interested in Russian and/or Caucasian culture have the opportunity to study in the Republic of North Ossetia, located in the Caucasus Mountains of southern Russia. IUP students may study at North Ossetia State University for a semester or academic year. Courses are offered in archaeology, business and economics, education, fine arts, humanities and social sciences, and natural sciences and mathematics.

**Slovakia, Bratislava.** Courses in Slovak language, Slovak literature, culture, and history, English literature, English culture and history, political science, sociology, physics, and psychology are available to interested students at Comenius University. The program is for one semester or an academic year.

**Spain, Barcelona.** Juniors and seniors, fluent in Spanish, with an interest in experiencing Spanish culture, have an opportunity to enroll in management, marketing, and tourism classes at Escuela Superior de Marketing I Administration. The language of instruction is Spanish.

**Spain, Valladolid.** Students who have completed twelve university credits in Spanish and have an interest in experiencing Spain's culture have an opportunity to participate in the Pennsylvania Valladolid Study in Spain Program during the spring semester. This experience will enable students to spend a period of twenty weeks immersed in Spanish culture and language at the University of Valladolid. For details and brochures, contact the Department of Spanish and Classical Languages.

**Sweden, Karlstad.** Students wishing to enroll in geography and tourism courses with a desire to experience Swedish culture are invited to study at the University of Karlstad. The language of instruction is English.

### International Student Exchange Program

The International Student Exchange Program offers a wide range of educational and cultural experiences for one semester or academic year for participants at over one hundred institutions in thirty-five different countries. (Summer and longer exchanges are also possible.) If you do not speak a foreign language, you still have many sites in which the language of instruction is English. If you do speak a foreign language, you have even more options.

### National Student Exchange

Under this program, Indiana University of Pennsylvania is part of a national university network that enables our undergraduate students to study for up to one academic year at any of over one hundred colleges and universities. In addition, this exchange of students enables IUP students to enroll at any of these universities without having to pay out-of-state, nonresident tuition fees. While on exchange, students have the opportunity to experience a different learning environment, to broaden social and cultural awareness, and to live in another part of the United States. (Alaska, Guam, Hawaii, Puerto Rico, and the Virgin Islands are included.)

### International Student Teaching Opportunities

IUP students enrolled as teacher education majors in all certification areas are eligible to participate in this half-semester student teaching program in the following areas: Copenhagen, Denmark; Dublin, Ireland; London, England; Munich, Germany; and Paris, France.

## The Harrisburg Internship Semester (T.H.I.S.)

### Experiential Education Office

The Harrisburg Internship Semester is available to an exceptional student from any IUP major for the fall or spring semester. The program provides a semester-long experience at the policymaking level in the executive or legislative branches of state government as well as independent boards, agencies, or commissions. Students will earn fifteen credits.

Requirements for eligibility are fifty-seven or more earned credits and an overall QPA of at least 3.0. Applicants must also submit a sample of their writing skills which must be a copy of an IUP writing assignment that has been graded by an instructor.

T.H.I.S. consists of an internship with a research project for twelve credits and an academic seminar for three credits. The program is directed by a SSHE faculty member elected to direct the program in Harrisburg. The faculty member will be the site supervisor and teach the seminar course. Grades and credits will be recorded on the students' academic progress reports at IUP. See the course descriptions under UN480 and UN493.

Housing is arranged at the PolyClinic Hospital in its nursing residence hall. Meals are available in the hospital dining room or elsewhere. Students must pay IUP tuition, room, and board in the first place and then be partially reimbursed via a biweekly paycheck during the semester. Students must pay their own transportation costs between their home and Harrisburg.

T.H.I.S. is offered through the Experiential Education Program in conjunction with the academic department of the successful candidate. Applications are submitted to the Experiential Education Office, Sutton Hall. Deadline for submission for fall is March 1; the spring semester deadline is October 1.

## The IUP Academy of Culinary Arts

**Albert Wutsch, Director; Hilary DeMane, Timothy Brown, Gary Fitting, Dan Kish, Clifford Klinger, and Thomas Vieli, Chef Instructors; Mindy Wygonik, Business Instructor**

The Academy of Culinary Arts offers a four-semester (sixteen calendar months), competency-based program with the last semester being a paid externship with an employer. This distinctive association involving hands-on discipline, fundamental culinary theory, and on-the-job work experience provides each student with the necessary skills and knowledge to begin a successful career in the field of culinary arts.

This contemporary approach to learning will enable students to achieve elevated levels of proficiency in both culinary techniques and business management skills while they advance through this certificate program. The Academy of Culinary Arts is accredited by the American Culinary Federation Educational Institute. Web browsers may visit the site at *http://www.iup.edu/cularts.*

# Eberly College of Business

**Robert C. Camp**, Dean
**Manmohan D. Chaubey**, Associate Dean

In the spring of 1994, the College of Business was renamed the Eberly College of Business. The new title of the college commemorates the generous commitment of the Eberly family through the Eberly Family Trust to the developmental needs of the college. Departments within the Eberly College of Business include Accounting, Finance and Legal Studies, Management, Management Information Systems and Decision Sciences, Marketing, and Office Systems and Business Education.

**College Majors**
Accounting
Business (Associate of Arts)
Business Education
Finance
Human Resource Management
International Business
Management Information Systems
Management
Marketing
Office Systems Administration

The Bachelor of Science degree is offered in Accounting, Finance, Management Information Systems, Management, Marketing, Office Systems Administration, and Human Resource Management. The Office Systems and Business Education Department offers the Bachelor of Science in Education degree with a Business Education major and Bachelor of Science in Education degree with a Marketing and Distributive Education major. There is also a two-year Associate of Arts degree in Business with a concentration in Computers and Office Information Systems offered at the Indiana and Punxsutawney campuses.

## Bachelor of Science Degree

For those pursuing the Bachelor of Science degree, IUP's training will provide a broad liberal background in the behavioral sciences; a keen perception of the socioeconomic world in which we live and work; a foundation of general professional education for personally fruitful and socially useful careers in the varied fields of business; and opportunity to obtain the specialized knowledge and skills essential to future occupational growth and advancement. There are seven Bachelor of Science degrees offered in business—Accounting, Finance, Human Resource Management, Management, Management Information Systems, Marketing, and Office Systems Administration. Each area provides for a variety of business and business-related courses which are designed to enrich the student's understanding of the modern business system.

A student may not pursue coursework in the Eberly College of Business with the expectation of graduating from the college unless he/she has been accepted as a degree candidate in the college.

Enrollment in all Eberly College of Business courses at the 300 and 400 level is restricted to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

Eberly College of Business students may, in consultation with their advisors, plan their program of study to obtain a minor in an area of business specialization other than their major or a related area outside of the Eberly College of Business.

## Bachelor of Science in Education Degree

The Eberly College of Business seeks to serve the needs of its students and the needs of business, industry, and education through its diverse programs. Known for fifty years for excellence in Business Education, IUP's program in Distributive Education prepares teacher-coordinators for secondary schools offering programs in marketing, distribution, and cooperative work experience. These two degree areas (Bachelor of Science in Education with a Business Education major and the Bachelor of Science in Education with a Marketing Education major) are designed to prepare teachers for

comprehensive high schools, area vocational-technical schools, and community colleges.

### Associate of Arts Degree

Students who desire a two-year program that prepares them to enter the business world may elect to pursue the Associate of Arts degree program specializing in Computer and Office Information Systems.

## Academic Units and Services

### Student Advisement and Internship Office

a. **Eberly College of Business Advisement Center (COBAC):** The center provides academic advisement to lower division and probationary students. It is staffed by a full-time faculty advisor for all Eberly College of Business freshman, sophomore, and probationary students. Peer advisors are available to answer questions on course selection, course scheduling, and selection and change of majors.
b. **Eberly College of Business Internship Office:** IUP offers one of the largest business internship programs in Pennsylvania. Business students can choose from a wide range of organizations to gain real-world experience while earning academic credits through internships. Most students complete an internship near their home during the summer. Internships are available during the fall and spring semester as well. Internships may even lead to job offers after graduation.

**School of International Management:** With the increasing demand for cross-cultural knowledge and international competence, Eberly College of Business has committed itself to a comprehensive strategy of providing future business leaders with a global foundation so they may become the world-class managers of tomorrow. The School of International Management offers a rich program that will strengthen business students and provide regional businesses with personnel who have a global perspective and internationally competitive management skills. This global perspective is provided to our students through broad exposure to cross-cultural coursework, integration of international concepts in selected business courses, direct exposure to individuals from other cultures, and a period of residency in another country.

The Eberly College's **Business Advisory Council** is a select group of more than fifty business leaders. The council helps the college in its educational and service mission through counsel and feedback on matters such as program objectives, curriculum development, program development and promotion, and recruitment and retention of students and faculty.

## Service Units

The **Management Services Group** is a confederation of consulting units instituted in 1991 by the Eberly College of Business in support of ongoing and start-up businesses in the Indiana county region. An integral objective of the group is to provide educational opportunities through an ongoing schedule of seminars and workshops for local businesses.

The **Indiana County Small Business Incubator** was established in 1986 as a joint effort between IUP, the Indiana county commissioners, and several county and state agencies. The Ben Franklin Partnership has provided operational capital and other support services since the incubator's inception. The incubator provides small start-up business with consultation, services, and space.

The **Small Business Institute (SBI)** was established to assist existing business with various types of problem resolution. Through the SBI, undergraduate and graduate business students work under close supervision of faculty members to assist clients with accounting systems, market studies, computer system installation, business planning, and operations management.

The **Government Contract Assistance Program** helps area business identify and respond to federal and state requests for bids for products and services. The program is funded by the Department of Defense. Contract sales generated through this program add to the vitality of the local economy.

## Department of Accounting

**Duane M. Ponko, Chairperson; Anderson, Bradwick, Burner, Davis, Eiteman, Ghobashy, Hudack, Hyder, Joseph, Kline, Lindh, Plivelic, Pressly, Robbins, Woan, Yerep; and professor emeritus Cooper**

The Accounting Department provides the training necessary for one to enter the fields of public accounting, accounting in business or industry, and governmental accounting.

### Bachelor of Science—Accounting

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54-56
**Mathematics:** MA121
**Social Science:** EC121, PC101
**Liberal Studies elective:** MA214, EC122, BE/CO/IM101, no courses with AG prefix

**College: Business Administration Core** 33
**Required courses:**

| | | |
|---|---|---|
| AD321 | Business and Interpersonal Communications | 3sh |
| AG201 | Accounting Principles I | 3sh |
| AG202 | Accounting Principles II | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| FI310 | Finance I | 3sh |
| IM300 | Information Systems: Theory and Practice | 3sh |
| MG310 | Principles of Management | 3sh |
| MG330 | Production and Operations Management | 3sh |
| MG495 | Business Policy | 3sh |
| MK320 | Principles of Marketing | 3sh |
| QB215 | Business Statistics | 3sh |

**Major: Accounting (1)** 27
**Required courses:**

| | | |
|---|---|---|
| AG301 | Intermediate Accounting I | 3sh |
| AG302 | Intermediate Accounting II | 3sh |
| AG311 | Cost Accounting | 3sh |
| AG401 | Advanced Accounting | 3sh |
| AG412 | Advanced Cost Accounting | 3sh |
| AG421 | Federal Taxes | 3sh |
| AG431 | Auditing | 3sh |

**Controlled electives:**
**Two courses from this list:** 6sh
AG422, AG435, AG441, AG451, AG461, AG471, BL336

**Other Requirements:** 0

**Free Electives:** 8-10

**Total Degree Requirements:** 124

(1) Students must meet the grade prerequisite(s) listed in the course description section of the Undergraduate Catalog prior to advancing to the next course.

## Department of Finance and Legal Studies

**Terry T. Ray, Chairperson; Affanch, Ames, Boldin, Duhala, McCaffrey, Roberts, Strock, Troxell, Welker**

### Finance Major

The Finance major, leading to the degree of Bachelor of Science, is designed to educate those students who are interested in the financial management of the firm.

The objective of the finance area is to prepare students to deal with financial problem solving in the areas of financial management and investment analysis. Graduates should be knowledgeable of the basic theory of finance so as to apply it to the rapidly changing field.

### Legal Studies

Legal Studies offers a variety of law and law-related courses with a special emphasis on business applications. Legal Studies provides the student with a solid, legally oriented background necessary to a career in business or as preparation for pursuit of a law or law-related career.

### Bachelor of Science—Finance

**Liberal Studies: As outlined in Liberal Studies section** **54-56**
with the following specifications:
**Mathematics:** MA121
**Social Science:** EC121, PC101
**Liberal Studies elective:** MA214, EC122, BE/CO/IM101, no courses with FI prefix

**College: Business Administration Core** *33*
**Required courses:**

| | | |
|---|---|---|
| AD321 | Business and Interpersonal Communications | 3sh |
| AG201 | Accounting Principles I | 3sh |
| AG202 | Accounting Principles II | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| FI310 | Finance I | 3sh |
| IM300 | Information Systems: Theory and Practice | 3sh |
| MG310 | Principles of Management | 3sh |
| MG330 | Production and Operations Management | 3sh |
| MG495 | Business Policy | 3sh |
| MK320 | Principles of Marketing | 3sh |
| QB215 | Business Statistics | 3sh |

**Major: Finance** 27
**Required courses:**

| | | |
|---|---|---|
| EC325 | Monetary Economics I | 3sh |
| FI320 | Finance II | 3sh |
| FI322 | Life Insurance | 3sh |
| FI324 | Principles of Investments | 3sh |
| FI420 | Investment Analysis | 3sh |
| FI422 | Seminar in Finance | 3sh |

**Controlled electives:**
**Three courses from the following:** AG421, EC326, EC334, EC345, EC356, FI312, FI355, FI385, FI410, FI424, QB380 9sh

**Other Requirements:** 0

**Free Electives:** 8-10

**Total Degree Requirements:** 124

## Pre-Law Minor in Eberly College of Business

The pre-law minor is intended for the student who is a business major concentrating in one of the business areas and interested in law as a career. The minor consists of 21 semester hours selected by the student from a predetermined list of courses spread over six areas of Humanities and Social Sciences. The goals of the pre-law minor are academic accomplishment, guidance, and advisement. Interested business students should contact the pre-law advisor in the Finance and Legal Studies Department.

### Bachelor of Science—Business/Pre-Law (1)

**Liberal Studies:** As outlined in Liberal Studies section **54-56**
with the following specifications:
**Mathematics:** MA121
**Social Science:** EC121, PC101
**Liberal Studies electives:** MA214, EC122, BE/CO/IM101, no courses with major prefix

**College: Business Administration Core** *33*
**Required courses:**

| | | |
|---|---|---|
| AD321 | Business and Interpersonal Communications | 3sh |
| AG201 | Accounting Principles I | 3sh |
| AG202 | Accounting Principles II | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| FI310 | Finance I | 3sh |
| IM300 | Information Systems: Theory and Practice | 3sh |
| MG310 | Principles of Management | 3sh |
| MG330 | Production and Operations Management | 3sh |
| MG495 | Business Policy | 3sh |
| MK320 | Principles of Marketing | 3sh |
| QB215 | Business Statistics | 3sh |

**Major: One Major in Business Administration Areas (1)** **27**
Accounting Major
Finance Major
Human Resources Management Major
Management Major/Industrial Management Track
Management Major/General Management Track
Management Major/Entrepreneurship and Small Business Track
Management Information Systems Major
Marketing Major
Office Systems Major

**Pre-Law Interdisciplinary Minor for Business** **9-21**
Seven courses, with at least one course from six areas
**Criminology:** CR210, 260, 357
**Economics:** EC121, 122, 332
**English:** EN212, 220, 310
**History:** HI320, 321, 346
**Philosophy:** PH101, 222, 450
**Political Science:** PS358, 359, 361

**Free Electives:** **0-1**

**(#) Total Degree Requirements:** **124-125**

(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.
(1) This program is the generic outline for the pre-law minor with any of the listed Eberly College of Business majors.

## Department of Management

**John N. Orife, Chairperson; Ali, Anderson, Ashamalla, Falcone, Gibbs, Nagendra, Osborne, Ryan, Soni, Wisnieski; and professors emeriti McGovern, Stevenson**

Graduates holding the Bachelor of Science degree in Management or Human Resource Management may find employment opportunities in both the public and private sectors. In the 1990s opportunities are expected to be especially plentiful in the services sector (e.g., retailing, health care, food services, finance, and transportation).

The Bachelor of Science in Management program offers three concentrations: Industrial Management, General Management, and Entrepreneurship and Small Business Management. Students in the Industrial Management concentration are well grounded in both management theory and application, but their focus is more upon production/operations/industrial management. The concentration in General Management is distinguished by its low level of structure or specificity. The greater flexibility of this major can be useful to the student who wishes to design a customized management specialization (e.g., fine arts management). Students taking the Entrepreneurship and Small Business Management concentration will focus on creation and operation of a small business. This concentration might also be desirable for graduates who will be working in small businesses where the manager often must wear several hats.

The Bachelor of Science in Human Resource Management prepares individuals in both the theoretical and applied aspects of managing the human resources function in organizations as a generalist or specialist.

The Bachelor of Science in International Business offers students an opportunity to acquire a thorough understanding of managing global operations in the contemporary business environment. In addition, students develop skills in a traditional functional area. The combination of these two objectives enable students to successfully perform in today's competitive global economy.

### Bachelor of Science—Management

**Liberal Studies: As outlined in Liberal Studies section** **54-56**
with the following specifications:
**Mathematics:** MA121
**Social Science:** EC121, PC101
**Liberal Studies elective:** MA214, EC122, BE/CO/IM101, no courses with MG prefix

**College: Business Administration Core** *33*
**Required courses:**

| | | |
|---|---|---|
| AD321 | Business and Interpersonal Communications | 3sh |
| AG201 | Accounting Principles I | 3sh |

| | | |
|---|---|---|
| AG202 | Accounting Principles II | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| FI310 | Finance I | 3sh |
| IM300 | Information Systems: Theory and Practice | 3sh |
| MG310 | Principles of Management | 3sh |
| MG330 | Production and Operations Management | 3sh |
| MG495 | Business Policy | 3sh |
| MK320 | Principles of Marketing | 3sh |
| QB215 | Business Statistics | 3sh |

**Major: Concentration** 27

**Industrial Management Concentration**

**Required courses:**

| | | |
|---|---|---|
| AG300 | Managerial Accounting | 3sh (1) |
| MG300 | Human Resource Management | 3sh |
| MG428 | Seminar in Management | 3sh |

**Controlled Electives:**

| | |
|---|---|
| One course from list: CO110 or IM251 | 3sh |
| Two courses from two areas on list: MG402 or LR480, MG401 or 400. AG311 | 6sh |
| Three courses from list or additional electives from above: BL336, EC371, EC372, EN310 or JN326, FI320, MA317, MG481. MG490, MG493(3sh max). MK420, QB380, SA101 | 9sh |

**General Management Concentration**

**Required courses:**

| | | |
|---|---|---|
| AG300 | Managerial Accounting | 3sh (1) |
| MG300 | Human Resource Management | 3sh |
| MG428 | Seminar in Management | 3sh |

**Controlled electives:**

| | |
|---|---|
| Two advanced Business electives: 300/400 level courses | 6sh (2) |
| Two advanced Economics electives: 300/400 level courses | 6sh |
| Two other advanced electives: 300/400 level courses | 6sh |

**Entrepreneurship and Small Business Management Concentration**

**Required courses:**

| | | |
|---|---|---|
| AG300 | Managerial Accounting | 3sh |
| MG275 | Introduction to Entrepreneurship | 3sh |
| MG325 | Small Business Management | 3sh |
| MG403 | Small Business Planning | 3sh |
| MG492 | Small Business/Entrepreneurship Internship | 6sh |
| Major Area Restricted Electives | | 9sh |

**Other Requirements:** 0

**Free Electives:** 8-10

**Total Degree Requirements:** 124

(1) AG301 Intermediate Accounting I may be substituted to use as prerequisite for AG311: Cost Accounting.
(2) Only one MG and/or one AG course may be included in this category.
(3) Note prerequisites for controlled electives in planning sequence.

## Bachelor of Science—Human Resources Management

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54-56
**Mathematics:** MA121
**Social Science:** EC121, PC101
**Liberal Studies elective:** MA214, EC122, BE/CO/IM101, no courses with MG prefix

**College: Business Administration Core** 33

**Required courses:**

| | | |
|---|---|---|
| AD321 | Business and Interpersonal Communications | 3sh |
| AG201 | Accounting Principles I | 3sh |
| AG202 | Accounting Principles II | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| FI310 | Finance I | 3sh |
| IM300 | Information Systems: Theory and Practice | 3sh |
| MG310 | Principles of Management | 3sh |
| MG330 | Production and Operations Management | 3sh |
| MG495 | Business Policy | 3sh |
| MK320 | Principles of Marketing | 3sh |
| QB215 | Business Statistics | 3sh |

**Major: Human Resource Management** 27

**Required courses:**

| | | |
|---|---|---|
| AG300 | Managerial Accounting | 3sh (1) |
| MG300 | Human Resource Management | 3sh |
| MG400 | Compensation Management | 3sh |
| MG428 | Seminar in Management | 3sh |

**Controlled electives:**

| | |
|---|---|
| One course from list: EC330 or PC390 | 3sh |
| One course from list: MG401 or MG402 | 3sh |
| Three courses from list: EC371, EC372, EC373, EN310. EN312, JN326, LR426. LR480, MG311, MG493(3sh max), EC330 or PC371, PC390 (if not above). SO340 | 9sh (2) |

**Other Requirements:** 0

**Free Electives:** 8-10

**Total Degree Requirements:** 124

(1) AG301 Intermediate Accounting I may be substituted to use as prerequisite for AG311: Cost Accounting.
(2) Note prerequisites for controlled electives in planning sequence.

## Bachelor of Science—International Business

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54-56
**Mathematics:** MA121
**Humanities:** PH222
**Social Science:** EC121, PC101, AN110/AN211/GE104/PS101
**Liberal Studies elective:** MA214. EC122. BE/CO/IM101, no courses with prefix of concentration area

**College: Business Administration Core** 33

**Required courses:**

| | | |
|---|---|---|
| AD321 | Business and Interpersonal Communications | 3sh |
| AG201 | Accounting Principles I | 3sh |
| AG202 | Accounting Principles II | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| FI310 | Finance I | 3sh |
| IM300 | Information Systems: Theory and Practice | 3sh |
| MG310 | Principles of Management | 3sh |
| MG330 | Production and Operations Management | 3sh |
| MG495 | Business Policy | 3sh |
| MK320 | Principles of Marketing | 3sh |
| QB215 | Business Statistics | 3sh |

Foreign Language Requirement (1)
Foreign Residency Requirement (2)

**Major: International Business**

**Required courses:** 12

| | | |
|---|---|---|
| EC345 | International Trade | 3sh |
| MG/MK350 | International Business | 3sh |
| MG454 | International Competitiveness | 3sh |
| MG459 | Seminar in International Management | 3sh |

**Concentration area courses: (select one concentration)**

**Finance concentration:** 12

| | | |
|---|---|---|
| FI320 | Finance II | 3sh |
| FI324 | Principles of Investment | 3sh |
| FI410 | Financial Institutions and Markets | 3sh |
| FI424 | International Financial Management | 3sh |

**Human Resources Management concentration:**

| | | |
|---|---|---|
| MG300 | Human Resources Management | 3sh |
| MG400 | Compensation Management | 3sh |
| MG452 | Comparative Management | 3sh |
| MG402 | Seminar in Human Resource Management | 3sh |

**Marketing concentration:**

| | | |
|---|---|---|
| MK321 | Consumer Behavior | 3sh |
| MK420 | Marketing Management | 3sh |
| MK421 | Marketing Research | 3sh |
| MK430 | International Marketing | 3sh |

**Free Electives:** 4-6

**Other Requirements:** 0

**Total Degree Requirements:** 124

(1) Candidates must demonstrate a conversational proficiency in a foreign language. This requirement may be met by: (a) successful completion of nine intermediate-level semester hours in a specific language, or (b) successful completion of an exemption or credit examination in lieu of the above. A foreign student. registered as such at IUP, whose acquired native language is other than English and who demonstrates an acceptable proficiency in English, can meet the foreign language requirement by successful completion of an exemption examination in the acquired native language.

(2) Candidates must document one semester of foreign residence (minimum of three months). Normally, the foreign residency requirement will be met in conjunction with a work experience, internship, or student exchange. A substitute cross-cultural experience may be permitted with the recommendation of the academic advisor. The foreign language requirement is a prerequisite to the foreign residency requirement.

## Department of Management Information Systems and Decision Sciences

**Kenneth L. Shildt, Chairperson; Albohali, Burky, Chen, Halapin, McFerron, Nahouraii, Pierce, Solak; and professor emeritus Spencer**

The Management Information Systems major prepares students for careers in the business computer and information systems profession. Computer programming languages, software engineering, systems analysis, design concepts, computer architecture, data base management systems, microcomputer applications, and computer networks are integrated with other business disciplines to prepare students to develop and maintain business information systems. The major also incorporates an emphasis on managerial and end-user concerns related to modern information systems.

Decision Sciences provides students with the knowledge of statistical and other quantitative techniques that will help decision making in business. The techniques include mathematical programming, forecasting. inventory control, simulation, queuing theory, stochastic process, and network models.

### Bachelor of Science—Management Information Systems

**Liberal Studies:** As outlined in Liberal Studies section 54-56
with the following specifications:
**Mathematics:** MA121
**Social Science:** EC121, PC101
**Liberal Studies electives:** MA214, EC122, BE/CO101, no courses with IM prefix

**College: Business Administration Core** 33
**Required courses:**

| | | |
|---|---|---|
| AD321 | Business and Interpersonal Communications | 3sh |
| AG201 | Accounting Principles I | 3sh |
| AG202 | Accounting Principles II | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| FI310 | Finance I | 3sh |
| IM300 | Information Systems: Theory and Practice | 3sh |
| MG310 | Principles of Management | 3sh |
| MG330 | Production and Operations Management | 3sh |
| MG495 | Business Policy | 3sh |
| MK320 | Principles of Marketing | 3sh |
| QB215 | Business Statistics | 3sh |

**Major: Management Information Systems** 27
**Required courses:**

| | | |
|---|---|---|
| CO220 | Applied Computer Programming | 3sh |
| IM350 | Business Systems Technology | 3sh |
| IM370 | Advanced COBOL | 3sh |
| IM450 | Data Base Theory and Application | 3sh |
| IM451 | Systems Analysis | 3sh |
| IM470 | Systems Design | 3sh |

**Controlled electives:**

| | | |
|---|---|---|
| At least one course from list: CO110, 250, 300, 310, 345 | | 3sh |
| Two courses from list: IM382, IM480, IM481, QB380, or above CO courses | | 6sh (1) |

**Other Requirements:** 0

**Free Electives:** 8-10

**Total Degree Requirements:** 124

(1) One course from AG300, 301, or 311 may be substituted.

## Department of Marketing

**Krish S. Krishnan, Chairperson; Batra, Bebko, Garg, Sciulli, Sharma, Taiani, Weiers**

The Bachelor of Science in Marketing program is designed to prepare its majors for a wide range of careers in private and public sector marketing including sales, management. retailing, brand management, customer affairs, marketing research, public relations, and international marketing. The program focuses on integrating technical knowledge in all areas of marketing with analytical and communication skills to prepare the students for the challenges of the global competition in the twenty-first century.

### Bachelor of Science—Marketing

**Liberal Studies:** As outlined in Liberal Studies section 54-56
with the following specifications:
**Mathematics:** MA121
**Social Science:** EC121, PC101
**Liberal Studies elective:** MA214, EC122, BE/CO/IM101, no courses with MK prefix

**College: Business Administration Core** 33
**Required courses:**

| | | |
|---|---|---|
| AD321 | Business and Interpersonal Communications | 3sh |
| AG201 | Accounting Principles I | 3sh |
| AG202 | Accounting Principles II | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| FI310 | Finance I | 3sh |
| IM300 | Information Systems: Theory and Practice | 3sh |
| MG310 | Principles of Management | 3sh |
| MG330 | Production and Operations Management | 3sh |
| MG495 | Business Policy | 3sh |
| MK320 | Principles of Marketing | 3sh |
| QB215 | Business Statistics | 3sh |

**Major: Marketing** 27
**Required courses:**

| | | |
|---|---|---|
| AG300 | Managerial Accounting | 3sh |
| MK321 | Consumer Behavior | 3sh |
| MK420 | Marketing Management | 3sh |
| MK421 | Marketing Research | 3sh |
| MK422 | Seminar in Marketing | 3sh |
| EC--- | Advanced Economics Elective: | |
| 300/400-level course | | 3sh |

**Controlled electives:**

| | | |
|---|---|---|
| Three courses from list: DE332, DE333, EC331, EC345, MK430, MK431, MK432, MK433, MK493(3sh max) | | 9sh |

**Other Requirements:** 0

**Free Electives:** 8-10

**Total Degree Requirements:** 124

## Department of Office Systems and Business Education

**Wayne A. Moore, Chairperson; Bianco, Brandenburg, Golden, Hemby, McPherson, Rowell, Smith, Szul, Woodland; and professors emeriti Beaumont, Patterson Cordera, Mahan, Moreau, Morris, Polesky, Sheeder, Thomas, Woomer**

This department offers the following degrees: Bachelor of Science in Education with a Business Education major. Bachelor of Science with a major in Office Systems, and a two-year Associate of Arts degree in Business with a Computer and Office Information Systems track.

### Office Systems Major (Bachelor of Science)

The Office Systems program is an intensive study of office systems emphasizing the decision-making aspect of office functions and the systems approach. The program includes in-depth experiences required for an understanding of the total office system and its relationship to the total business and economic system.

The Office Systems program prepares students for careers such as office managers or supervisors, records managers, telecommunications consultants/managers, PC analysts, microcomputer user coordinators, and office systems analysts.

### Business Education Major (Bachelor of Science in Education)

The IUP Business Education program is accredited by the National Council for Accreditation of Teacher Education (NCATE). The program leads to the degree of Bachelor of Science in Education and to certification in Pennsylvania as a business education teacher.

Our program in business education is dedicated to preparing teachers who will be qualified and certificated to instruct students to live and work in a business environment.

The major is intended for those interested in teaching in public junior and senior high schools, vocational-technical schools, private business schools, or industry. Students have a choice of the following certification areas: accounting, data processing, marketing, office technologies, secretarial, and marketing/distributive education. They must select two or more areas of certification; one of the two areas must be office technologies. Students seeking certification in marketing/distributive education must select the areas marketing and marketing/distributive education. The courses required in each area are as follows:

**Secretarial:** BE260*, 261*, 262*, 312 (Secretarial)
**Accounting:** AG300, 301, 421, BE312 (Accounting)
**Office Technologies:** BE132, BE264, OS301, OS400, BE312 (Office Tech)
**Data Processing:** OS400, IM251, IM255, BE312 (Data Processing)
**Marketing:** DE331, 332, 333, BE312 (Marketing)
**Marketing/Distributive Education:** MK421, MK433, MK elective, DE413**

*Students should transfer these courses from another Middle States-accredited institution or obtain credit by exam.
**Offered on an individualized basis.

A student must apply to the dean of the College of Education to receive an initial certificate to teach in Pennsylvania's public schools. Certification to be a business education teacher is approved by the dean of the College of Education when a student has met all the requirements in professional education, Liberal Studies, and business education major courses. Students must attain a 2.5 overall average in order to student teach. See details of the four-step process in the section "Admission to Teacher Education and Certification" in the Academic Policies section of this catalog. The candidate for certification must also complete successfully the core battery and specialization sections of the National Teachers' Examination.

All students who take a business education major also complete a track in the College of Education and must meet the standards set by that college *(see Department of Office Systems and Business Education Student Handbook, page 8)*.

### Practical Business Experience

Before graduation, each business education student must document completion of 500 hours of secretarial practice, accounting practice, data processing, clerical practice, or office-related experience. This experience should be in the field or fields in which the student is contemplating certification and can be acquired during summer vacations and in offices on the campus during the regular school term. Previous documented experience may also be counted.

### Bachelor of Science in Education—Business Education (*)

| | | | |
|---|---|---|---|
| **Liberal Studies:** As outlined in Liberal Studies section with the following specifications: | | | **53-55** |
| **Mathematics:** BE111 | | | |
| **Social Science:** EC121, PC101 | | | |
| **Liberal Studies electives:** EC122, MA214, BE/CO/IM101 | | | |
| **College:** | | | **32-36** |
| **Professional Education sequence:** | | | |
| BE311 | Methods and Evaluation in Business and Marketing Education I | 3sh | |
| BE312 | Methods and Evaluation in Business Education II | 2-6sh | |
| CM301 | Technology for Learning and Instruction | 3sh | |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh | |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh | |
| ED441 | Student Teaching | 12sh | |
| ED442 | School Law | 1sh | |
| EP202 | Educational Psychology | 3sh | |
| FE202 | American Education in Theory and Practice | 3sh | |
| EX300 | Education of the Exceptional in the Regular Classroom (or pass examination) | 3sh (1) | |
| **Major:** | | | **44-47** |
| **Required courses: Business Education Core** | | | |
| AD101 | Introduction to Business | 3sh | |
| AD321 | Business and Interpersonal Communications | 3sh | |
| AG201 | Accounting Principles I | 3sh | |
| AG202 | Accounting Principles II | 3sh | |
| BL235 | Introduction to Business Law | 3sh | |
| BL337 | Consumer Law | 3sh | |
| IM300 | Information Systems: Theory and Practice | 3sh | |
| MK320 | Principles of Marketing | 3sh | |
| **Controlled electives:** | | | |
| Areas of Certification | | 20-23sh | |
| **Other Requirements:** | | | **0** |
| **Free Electives:** | | | **0** |
| **(#) Total Degree Requirements:** | | | **129-138** |

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

## Bachelor of Science—Office Systems

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-56**
**Mathematics:** MA121
**Social Science:** EC121, PC101
**Liberal Studies electives:** MA214, EC122, BE/CO/IM101

**College:** **33**
**Required courses: Business Administration Core**

| | | |
|---|---|---|
| AD321 | Business and Interpersonal Communications | 3sh |
| AG201 | Accounting Principles I | 3sh |
| AG202 | Accounting Principles II | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| FI310 | Finance I | 3sh |
| IM300 | Information Systems: Theory and Practice | 3sh |
| MG310 | Principles of Management | 3sh |
| MG330 | Production and Operations Management | 3sh |
| MG495 | Business Policy | 3sh |
| MK320 | Principles of Marketing | 3sh |
| QB215 | Business Statistics | 3sh |

**Major:** **27**
**Required courses:**

| | | |
|---|---|---|
| IM251 | Business Systems Analysis and Design | 3sh |
| OS301 | Advanced Microcomputer Applications | 3sh |
| OS313 | Office Systems Technology | 3sh |
| OS315 | Records Administration | 3sh |
| OS400 | Telecommunications | 3sh |
| OS411 | Microcomputer Support for Office Systems | 3sh |
| OS480 | Seminar in Office Systems | 3sh |
| ----- | Business Electives | 6sh |

**Other Requirements: (1)** **0-1**

**Free Electives:** **7-11**

**Total Degree Requirements:** **124**

(1) Student must pass BE134 with a "C" or better or pass an exemption exam.

## Associate of Arts Degree

Offering specialization in computer and office information systems (COIS), the Associate of Arts Degree in Business is designed to be a two-year curriculum with these objectives:

1. To provide business occupational education with the opportunity for specialization in COIS.
2. To enable the student to enter COIS positions in business and government.
3. To enable the student to upgrade his/her skills and knowledge to qualify for higher positions in business and government.
4. To provide the foundation to continue education in a four-year degree program. This program is offered at the Indiana campus only.

The university has suspended admission to the COIS program at the Armstrong Campus.

### Tech Prep

The Office Systems and Business Education Department has signed articulation agreements with high schools throughout Western Pennsylvania. Graduates of these approved programs have the opportunity schedule advanced courses and develop higher level skills to enhance employment options. For additional information, contact the department secretary at 412-357-3003.

## Associate of Arts—Business

**Liberal Studies:** as follows: **13**

| | | |
|---|---|---|
| **English:** EN101 | | 4sh |
| **Humanities or Fine Arts:** one course from lists | | 3sh |
| **Social Science:** EC101 or EC121. PC101 | | 6sh |

**Major: Business (Associate) Core** **32**
**Required courses:**

| | | |
|---|---|---|
| AD101 | Introduction to Business | 3sh |
| AD221 | Business Technical Writing | 3sh |
| AG201 | Accounting Principles I | 3sh |
| AG202 | Accounting Principles II | 3sh |
| BE111 | Foundations of Business Mathematics | 3sh |
| BE131 | Keyboarding and Document Formatting | 2sh |
| BE250 | Electronic Office Procedures | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| FI220 | Essentials of Finance | 3sh |
| IM241 | Introduction to Management Information Systems | 3sh |
| IM245 | Introduction to Microcomputers | 3sh |

**Other Requirements:**
**Computer and Office Specialization:** **12**

| | | |
|---|---|---|
| BE273 | Word Processing Applications | 3sh |
| IM251 | Business Systems Analysis and Design | 3sh |
| IM255 | Business Applications in COBOL | 3sh |
| IM260 | Business Computer Application Project | 3sh |

**Free Electives:** **3**

**Other Requirements:** **0**

**Total Degree Requirements:** **60**

## Minor—Office Systems **15**

(for Business Majors in the Eberly College of Business only)
Required courses:

| | | |
|---|---|---|
| OS301 | Advanced Microcomputer Applications | 3sh |
| OS313 | Office Systems Technology | 3sh |
| OS315 | Records Administration | 3sh |
| OS400 | Telecommunications | 3sh |
| OS411 | Microcomputer Support | 3sh |

## Business Minors for Eberly College of Business Students

Minors in Accounting, Finance, Human Resources Management, Management Information Systems, Marketing, and Office Systems are offered only for students who are majoring in one of the other majors in the Eberly College of Business and assume the common thirty-six-credit Business core.

## Minor in Business Administration for Non-Business Majors

The Eberly College of Business offers, as a joint effort of its departments, a twenty-one credit hour minor for non-business majors. The program is designed to give non-business majors a general background in business with twelve credits of prescribed Liberal Studies courses and twenty-one credits of required business courses.

## Prescribed Liberal Studies:

**Social Science:** EC121
**Mathematics:** MA214 or MA217
**Liberal Studies Electives:** BE/CO/IM101. EC122

**Required Business Courses:** **15**

| | | |
|---|---|---|
| AG201 | Accounting Principles I | 3sh |
| AG202 | Accounting Principles II | 3sh |
| FI310 | Finance I | 3sh |
| MG310 | Principles of Management | 3sh |
| MK320 | Principles of Marketing | 3sh |

**Two of the following with advisement:** **6**

| | | |
|---|---|---|
| AD321 | Business and Interpersonal Communications | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| IM300 | Information Systems: Theory and Practice | 3sh |

# The College of Education

**John W. Butzow**, Dean
**Joyce Lynn Garrett**, Associate Dean for Administration and Academic Affairs
**John R. Johnson**, Associate Dean for Educational College-School Partnerships

Since its founding in 1875 as the Indiana Normal School, Indiana University of Pennsylvania has been widely recognized for its excellent programs in teacher education. Although the scope of the university has been greatly expanded, the College of Education continues the tradition of preparing outstanding teachers to serve the students of the commonwealth and the nation.

The College of Education comprises nine multidimensional departments which offer twenty-five programs leading to the bachelor, master, and doctoral degrees. Undergraduate programs prepare students in teacher education (elementary, early childhood, secondary, vocational, and special education), communications media, and rehabilitation. In addition, a diverse set of graduate programs, detailed in the Graduate School Catalog, meet the needs of practitioners in basic education, higher education, counseling, and communications media.

The departments of the college are Professional Studies in Education, Foundations of Education, Communications Media, Special Education and Clinical Services, Educational and School Psychology, Counselor Education, Student Affairs in Higher Education, Adult and Community Education, and the University School. Each department makes a unique contribution to the total preparation of students within the college. Some programs provide service courses to enhance the professional preparation of students; others, such as professional programs in teacher education, public school administration, and personnel services lead to certification for public school teaching or supervision in the Commonwealth of Pennsylvania.

The College of Education is well known for its opportunities to practice "hands-on" learning. Over five hundred students enjoy early field experiences each semester. In addition, the College of Education places about six hundred student teachers each year in public schools which provide a full semester of supervised teaching experience. Students are encouraged to take advantage of a full range of activities offered in urban, rural, and multicultural settings.

Practical experiences are important for students majoring in communications media and rehabilitation as well. Students in these programs are prepared in one of the largest internship programs in Pennsylvania. They select supervised work experiences with agencies throughout the commonwealth and neighboring states; many students are so successful in their internship placements, they are hired immediately upon graduation.

## Summary of Certification Programs Offered

### Bachelor of Science in Education (B.S.Ed. with certification)

**Elementary Education**
**Early Childhood Education**
**Secondary Education**
*For details, see the College of Humanities and Social Sciences:*
English, French, German, Social Science, Spanish
*For details, see the College of Natural Sciences and Mathematics:*
Biology, Chemistry, Earth and Space Science, General Science, Mathematics, Physics
*For details, see the College of Health and Human Services:*
Health and Physical Education, Home Economics
*For details, see the College of Fine Arts:*
Art (K-12), Music (K-12)
*For details, see the Eberly College of Business:*
Business

Special Education
- Speech-Language Pathology and Audiology
- Education of Exceptional Persons
- Education of Persons with Hearing Loss

Vocational/Technical Education

### Bachelor of Science Degree (B.S.)
- Rehabilitation
- Communications Media

### Graduate Programs *(See the Graduate School Catalog)*

### Master's Degree (M.Ed. unless otherwise noted)
- Education of Exceptional Persons
- Speech-Language Pathology (M.S.)
- Adult and Community Education (M.A.)
- Counselor Education
- Educational Psychology
- Reading Specialist
- Student Affairs in Higher Education (M.A.)

### Doctoral Degree (D.Ed.)
- Elementary Education
- School Psychology
- Education Leadership (with Superintendent's Letter of Eligibility)

### Certification Only
- Reading Specialist
- School Psychologist
- Elementary/Secondary Principal
- Superintendent's Letter of Eligibility

## Teacher Certification Programs

Programs in teacher education provide students with opportunities to gain competence in both generic and program-specific competencies. Students who prepare to become teachers should be able to:

1. Demonstrate depth and breadth of knowledge in subject matter content and pedagogical skills.
2. Demonstrate an understanding of and the ability to apply the theoretical and practical aspects of human growth and development as they relate to teaching and learning.
3. Demonstrate skills and abilities to work collaboratively with others.
4. Demonstrate professional commitment to students, colleagues, and the community.
5. Demonstrate the belief that professional development is an ongoing process.
6. Demonstrate an understanding of the historical and philosophical foundations of American education.

Teacher education programs at IUP focus on student learners who are taught and guided by a faculty committed to the preparation of competent teachers. Students preparing to become teaching professionals must exhibit humanism and adaptability, practice and communicate critical thinking skills, and become excellent role models. These qualities are developed through coursework and activities that emphasize the liberal studies in concert with appropriate professional pedagogy. Collaboration is modeled as university faculty, public school personnel, and students work together to accomplish goals of the IUP teacher education programs.

## Degree Requirements

All degree candidates in the College of Education (except for three special programs) must satisfactorily complete a minimum of 124 semester hours in three categories: Liberal Studies, a specialized major field, and professional education. Program revisions are ongoing in an attempt to provide teachers in training with the most current information related to teaching and learning. Students should always consult with advisors to determine what changes, if any, have been made in their chosen program of study.

**Liberal Studies**—52-55 semester hours, described in this catalog under Requirements for Graduation.

**Specialized major field**—requirements listed under department offerings.

**Professional Education**—30 semester hours, as follows:

| | | |
|---|---|---|
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED442 | School Law | 1sh |
| Methods Course - (Teaching of _____) | | 3sh |
| Student Teaching - (One semester) | | 12sh |

## Admission to Teacher Education Programs

University policy outlines a 4-step process for all students seeking teacher certification; the process applies to students from the time they are admitted to the teacher certification program until they graduate with recommendation for certification. The 4-Step Process policy consists of four separate phases: Teacher Certification, Junior Standing, Student Teaching, and Recommendation for Certification. The policy is fully explained in the Academic Policies section of the catalog under the heading "Admission to Teacher Education and Certification." It is imperative that students thoroughly understand the policies, procedures, and consequences of the 4-Step process as it applies to their program of study.

Admission to teacher education programs is competitive and requires students to meet the requirements outlined in Step 1 of the 4-Step Process. To qualify for admission to teacher education, all students must complete a minimum of 29 semester hours with a cumulative QPA of 2.5 or higher. In addition, students are required to submit the following items to the Dean's Office in the College of Education: (1) an application for Teacher Certification signed by the student's advisor; (2) verification of a negative TB test; (3) clearance on an initial speech and hearing test; and (4) criminal and child abuse record clearances, Acts 33/34/151.

Students who do not achieve and maintain a cumulative QPA of 2.5 or higher are unable to take coursework in the teacher education core. Some programs apply the same standard to courses in the professional core as well. Further details about core education requirements are discussed in the catalog section under Academic Policies: Admission to Teacher Education. Details of specific program requirements can be found in the section of the catalog which describes each department's programs of study. For example, a description of the Chemistry Education program may be found under the College of Natural Sciences and Mathematics, Chemistry Department, Secondary Chemistry Education; a description of the Music Education program is located under the College of Fine Arts, Music Department, Music Education; and the Elementary Education program is described under the College of Education, Professional Studies in Education Department, Elementary Education.

## Student Teaching

Student teaching is designed to be the culminating learning experience for prospective teachers. Student teachers practice teaching and managing a classroom under the supervision of a full-time master teacher in an off-campus center. A university supervisor is assigned to work with individual student teachers and cooperating teachers. To gain admission to student teaching, applicants must have achieved a minimum cumulative quality-point average of 2.5. In addition, students must complete all requirements of the 4-Step Process and should complete all other components of the Liberal Studies and professional core before student teaching. Some programs have standards above the minimum 2.5 cumulative QPA and/or course grade expectations above the minimum grade of C. Each student should counsel with his/her advisor for information about specific program requirements related to qualification for student teaching.

## Certification Requirements

College of Education requirements for recommendation for certification as a teacher, as well as the intermediate steps leading to commonwealth certification, are outlined in the 4-Step Process. The catalog section on Academic Policies under the title "Admission to Teacher Education and Certification" gives more detail about the requirements for certification. The requirements include:

- a minimum grade of C in all professional education courses and a cumulative QPA of 2.5
- review and recommendation by the major academic advisor indicating completion of all university and departmental teacher education requirements
- completion of student teaching with a minimum grade of C
- successful completion of the NTE Core Battery and NTE Specialty Area Tests
- competency in working with students with special needs (Special Education)

Applications for certification cannot be processed until the student completes the Bachelor of Science in Education degree or its equivalent.

## Dual Certification

The departments of Professional Studies in Education and Special Education and Clinical Services have developed guidelines for students wishing to complete academic requirements for a second certification. Students majoring in Elementary Education or Early Childhood Education may do this in either Education of Persons with Hearing Loss or Education of Exceptional Persons. Majors in Education of Persons with Hearing Loss or Education of Exceptional Persons may do this in either Early Childhood Education or Elementary Education. Forms for applying for dual certification are available in the offices of the two departments. Applications must be approved by the student's advisor and by the department chairperson or assistant chairperson of both departments. Students are advised that the completion of requirements will take approximately two extra semesters, and they may wish to explore the possibility of completing the second certification at a graduate level.

## Commonwealth Requirements for Teacher Certification

*(Excludes Vocational Instructional Certification. See section called "Center for Vocational Personnel Preparation.")*

Certification standards for commonwealth public school teachers are established by the Pennsylvania Department of Education and the Pennsylvania Board of Education. The academic advisor of the student's major department must verify for the dean of the College of Education that all academic requirements are met. The student's name is then placed on the graduation list.

Applicants for certification must sign an attestment of United States citizenship. Applicants who are not citizens must have an immigrant visa which permits them to seek employment within the United States, and they must have declared the intent to become citizens of the United States. Applicants must also submit a physical examination report and certify they are not in the habit of using narcotic drugs in any form, do not use excessive amounts of intoxicating beverages, are not currently under indictment by legal authorities, and have not been convicted of a criminal offense. Applicants who are unable to meet one or more of these requirements must submit a full explanation with the application. In addition, they must attest to the fact that all information supplied in the application is accurate.

The Pennsylvania Department of Education issues an Instructional I certificate to beginning teachers upon graduation from and recommendation by the College of Education. All candidates for the Instructional I certificate must successfully pass the National Teacher Exam general knowledge battery and selected specialty areas tests. Since IUP is a designated test site, registration for the NTE may be completed through University Testing Services in the Career Services office. After completion of 24 additional semester hours of collegiate and/or in-service coursework and with successful teaching experience, students are eligible to receive an Instructional II certificate, which is a permanent certification to teach in the Commonwealth of Pennsylvania.

## The University Clinics

Two clinics under the supervision of the College of Education offer diagnostic testing, remedial services, and instruction. The Speech and Hearing Clinic is organized and managed by the Department of Special Education and Clinical Services. The Child Study Center is housed in the Department of Educational and School Psychology.

**The Speech and Hearing Clinic** is staffed by Special Education faculty and supervised graduate students working toward advanced degrees in Speech-Language Pathology. Using state-of-the-art equipment, clinic personnel provide diagnosis of speech problems and hearing tests and evaluations, as well as a regular program of therapy for clients. As part of this program, clinic staff members provide testing and necessary therapeutic services to all teacher education candidates, who must meet strict speech and hearing clearances. Regularly enrolled students at the university, including all teacher certification candidates, are eligible to receive these services without charge.

**The Child Study Center** provides opportunities for Educational Psychology graduate students in the post-master's certification and doctoral programs to acquire professional skills under the supervision of certified faculty supervisors. Clinic personnel provide psychological assessment for children and adolescents with learning and/or behavior problems. They also provide consultation for parents and public school personnel involved with these children.

## Graduate Programs

Information describing master's and doctoral programs in education may be found in the current issue of the Graduate School Catalog.

## The University School

**Marilyn S. Howe, Director; Beisel, Ellermeyer, Ford Grove, Hechtman, Mambo, Marlin, Stephenson, Yost; and professors emeritae Davis, Fleming, Lingenfelter, Martin, Walthour**

The University School is located in Davis Hall on the IUP campus, where it is housed with the departments of Professional Studies in Education and Special Education and Clinical Services. The University School provides a program of instruction for students in kindergarten through sixth grade. In addition, the school offers a rich variety of experimental and research activities for IUP faculty and students. Faculty members from disciplines as varied as music, physical education, Spanish, elementary education, and special education have ongoing programs which are carried out at the University School. Each year, hundreds of teacher education students participate in activities such as observations, lesson presentations, and student teaching. Graduate students utilize the University School to conduct research on teaching and learning. Research and experimental activities are scheduled with the director of the University School.

The University School is a member of the National Association of Laboratory Schools. Faculty at the University School have received many grants and teaching awards in recognition of their contributions to the education profession.

## Center for Vocational Personnel Preparation

**Thomas W. O'Brien, Director**

## Vocational-Technical Professional Studies

**Sandra J. Durbin, Chairperson; Boyd, Brady, Debow, Dolecki, Jakubowski, Keith, Mielke, Spewock, Sylves, Whisner**

The Vocational-Technical Professional Studies program offers undergraduate and graduate curricula that prepare preservice teachers, in-service teachers, supervisors, and administrators in vocational-technical education. Students enrolling in one of the vocational education programs may specialize in an area related to interest and/or previous work experience. Programs may lead to either a Bachelor of Science in Education degree with certification or to professional certification only. Program graduates have a broad range of employment opportunities as teachers/trainers in secondary schools, vocational-technical schools, postsecondary schools, and private industry.

Certification to teach vocational-technical education in the commonwealth's secondary schools is issued to individuals who meet statutory requirements, demonstrate occupational/technical proficiency on a nationally standardized occupational competency examination, and complete 60 credit hours of the Pennsylvania Department of Education's approved university program. In the IUP program, a plan of studies will be tailored to each student's unique background (i.e., electrical, electronics, data processing, drafting, welding, dental, etc.) and professional needs.

Certification to serve as a cooperative education teacher-coordinator in the commonwealth's secondary schools can be earned by completing a program of studies tailored to each student's individual background and professional needs. The program prepares individuals for managing industrial cooperative training and school-to-work transitional experiences. For persons holding a valid Pennsylvania Instructional Certificate, the program of studies will be individualized based upon educational credits earned.

Each program offered by the Center for Vocational Personnel Preparation requires completion of the following semester hours:

| | |
|---|---|
| The Bachelor of Science in Education | 124sh |
| The Cooperative Education Teacher/Coordinator Certificate | 75sh |
| The Vocational Technical Education Certificate | 60-62sh |

## Bachelor of Science in Education—Vocational-Technical Education

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Social Science:** PC101
**Liberal Studies electives:** no courses with VO prefix

**College:** 6
**Professional Educational sequence:**

| | | |
|---|---|---|
| EP202 | Educational Psychology | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 30
**Required courses:**

| | | |
|---|---|---|
| VO100 | Preparation of the Vocational Professional I | 15sh |
| VO400 | Preparation of the Vocational Professional II | 15sh |

**Other Requirements:** 27
**Vocational Technical:**

| | | |
|---|---|---|
| EN310 | Public Speaking | 3sh |
| VO401 | Special Topics in Vocational Technical Preparation | 3-12sh |
| VO402 | Special Topics in Vocational Pedagogical Preparation | 3-15sh |
| VO450 | Technical Preparation of the Vocational Professional | 24sh |
| ---- | Other as approved | |

**Free Electives:** 6-8

**Total Degree Requirements:** 124

## Certificate—Vocational-Technical Education

**Liberal Studies:** As follows: 21-23
**Mathematics:** MA101
**English:** EN101
**Humanities:** one course from lists
**Fine Arts:** one course from list
**Natural Science:** one course, lab or non-lab
**Social Science:** PC101
**Liberal Studies electives:** one course, no course with VO prefix

**College:** 6
**Professional Educational sequence:**

| | | |
|---|---|---|
| EP202 | Educational Psychology | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 33
**Required courses:**

| | | |
|---|---|---|
| EN310 | Public Speaking | 3sh |
| VO100 | Preparation of the Vocational Professional I | 15sh |
| VO400 | Preparation of the Vocational Professional II | 15sh |

**Free Electives:** 0

**Total Certification Requirements:** 60-62

## Certificate as Secondary School Cooperative Education Teacher/Coordinator

**Liberal Studies:** As follows: 21-23
**Mathematics:** MA101
**English:** EN101
**Humanities:** one course from lists
**Fine Arts:** one course from list
**Natural Science:** one course, lab or non-lab
**Social Science:** PC101
**Liberal Studies electives:** one course, no courses with VO prefix

**College:** 6
**Professional Educational sequence:**

| | | |
|---|---|---|
| EP202 | Educational Psychology | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 48
**Required courses:**

| | | |
|---|---|---|
| EN310 | Public Speaking | 3sh |
| VO100 | Preparation of the Vocational Professional I | 15sh |
| VO400 | Preparation of the Vocational Professional II | 15sh |
| VO402 | Special Topics in Vocational Pedagogical Preparation | 15sh |

**Free Electives:** 0

**Total Certification Requirements:** 75-77

# Department of Adult and Community Education

**Gary J. Dean, Chairperson; Ferro**

The Department of Adult and Community Education is a graduate department offering two programs leading to the Master of Arts degree. Adult and Community Education helps students learn about teaching and planning educational programs for adults in a wide variety of settings including business and industry, the community, health agencies and hospitals, colleges and universities, and religious institutions. The Master of Arts in Adult Education and Communications Technology, jointly administered by the Department of Communications Media, prepares students to become adult educators with an emphasis on the use of technology such as computers, production design, radio and television, and distance education technology.

# Department of Communications Media

**Kurt P. Dudt, Chairperson; Ausel, Handler, Juliette, Kanyarusoke, Kornfeld, Lamberski, Leidman-Golub, Start, Willis, Wilson; and professors emeriti Klingensmith, MacIsaac, Murray, Sargent, Young**

The department offers a Bachelor of Science in Communications Media and two minors, one in Communications Media and one in Educational Technology. The minor in Communications Media is an eighteen-credit program designed to complement any major. The minor in Educational Technology is a twenty-four-credit program designed for students in the College of Education who are completing a teaching degree. The department also serves preservice teachers and other students who are required to complete the course Technology for Learning and Instruction, CM 301.

The philosophy of the Communications Media Department is to prepare generalists in the area of Communications. Our students may select from a number of elective courses, depending on their career interests.

The department faculty offers a wide variety of experience in all areas of communications media. With the combination of classroom work and the optional internship program, departmental graduates are competitive for positions in various areas. Students graduating with a degree in Communication Media have obtained positions in such areas as radio.

television, cable television, public relations, advertising media, media relations, and corporate media relations.

Students changing majors from other academic departments within the university are required to be in good academic standing before the transfer will be approved.

### Bachelor of Science—Communications Media (@)

| | | | |
|---|---|---|---|
| **Liberal Studies:** As outlined in Liberal Studies section with the following specifications: | | | 54-55 |
| **Social Science:** PC101 | | | |
| **Liberal Studies electives:** BE/CO/IM101, no courses with CM prefix, not to include courses cross-listed with CM | | | |
| **College:** | | | 3 |
| EP202 | Educational Psychology or | | |
| EP388 | Interpersonal Effectiveness and Communication | 3sh | |
| **Major:** | | | 42 |
| **Required courses:** | | | |
| CM101 | Communications Media in American Society | 3sh | |
| CM200 | Images | 3sh | |
| CM395 | Career Planning in Communications Media | 1sh | |
| **One course from the following list:** | | | |
| CM303 | Scriptwriting | 3sh | |
| CM330 | Communications Media in Training and Education | 3sh | |
| CM403 | Writing for Broadcasting | 3sh | |
| **Controlled electives:** | | | |
| Other Communications Media elective couses | | 32sh | |
| **Other Requirements:** | | 18sh | |
| Out-of College Requirement (advisor approval) | | | |
| **Free Electives:** | | | 6-7 |
| **(#) Total Degree Requirements:** | | | 124 |

(@) To be implemented 1997-98, pending Council of Trustees approval
(#) A maximum of 12 sh of CM493 can be applied to requirements for graduation.

### Minor—Communications Media 18

| | | |
|---|---|---|
| **Required courses:** | | |
| CM101 | Communications Media in American Society | 3sh |
| CM--- | Electives in Communication Media | 15sh |

### Minor—Educational Technology 24

| | | |
|---|---|---|
| **Required courses:** | | |
| CM101 | Communications Media in American Society | 3sh |
| CM460 | Alternative Systems of Communication | 3sh |
| CO101 | Microbased Computer Literacy | 3sh |
| CM--- | Electives in Communications Media | 15sh |

## Department of Educational and School Psychology

**William F. Barker, Chairperson; Briscoe, Damiani, Hoellein, Levinson, Quirk, Rafoth, Rattan; and professors emeriti DeFabo, Meadowcroft, Shank, Yanuzzi**

The department services undergraduate and graduate students. Undergraduate students may declare a minor in Educational Psychology by making application to the department chairperson. Fifteen semester hours from the courses are required for the minor in educational psychology.

The department also offers the M.Ed. in Educational Psychology as well as a post-master's certification and a Doctor of Education in School Psychology. Refer to the current Graduate School Catalog for details.

## Department of Foundations of Education

**Kurt P. Dudt, Interim Chairperson; Penta, Rotigel, Thibadeau; and professor emeritus Chu**

The Department of Foundations of Education serves all undergraduate students in teacher certification preparation with an introductory course, American Education in Theory and Practice. Additional areas of coursework are in urban education, curriculum development, and contemporary issues and trends in education.

Graduate courses offered by this department include Comparative, Historical, Philosophical, and Social Foundations of Education; Curriculum Development; Professional Negotiations in Education; and International Education Studies Program. For specific information concerning these courses, see the current edition of the Graduate School Catalog.

## Department of Professional Studies in Education

**Edwina B. Vold, Chairperson; Bieger, Briscoe, Carreiro, Cole Slaughter, Corbett, Elliott, Fennimore, Gerlach, Jalongo, Kaufman, King, Kupetz, Mikkelsen, Millward, Nastase, Stamp, Tidwell, Mark Twiest, Meghan Twiest, L. Vold, Willis, Yan; and professors emeriti Dorsey, Glott, Lore, Lott, McFeely, Mott, Reilly, Rizzo**

### Elementary Education Program

The Elementary Education program is designed to provide learning experiences which will assist students in developing into highly competent and effective teachers in grades K-6. Students are able to expand their knowledge through coursework and field experiences which embody content, knowledge of liberal studies, pedagogy, curriculum, human development and learning, and a historical and philosophical basis to undergird one's professional behavior. A 2.5 cumulative QPA is required to apply for teacher certification, to take major courses in the department, to apply for Junior Standing, and to student teach.

### Early Childhood Education Program

The Early Childhood Education Program is designed to provide learning experiences which assist students to become competent and effective teachers in N-Grade 3. It prepares the students to select from among a variety of techniques and strategies those which appropriately expand children's cognitive, social, emotional, and physical development. Through lectures, research, and on-site experiences with young children, students are able to expand their own knowledge of and attitudes toward education of young children.

A 2.5 cumulative QPA is required to apply for teacher certification, to take major courses in the department, to apply for junior standing, and to student teach. Students must meet the requirements leading to teacher certification as outlined in the Academic Policies section of this catalog.

### Graduate Programs

Programs leading to the M.Ed. and Ed.D. degrees are described in the current issue of the Graduate School Catalog. Internships and assistantships are available.

## Bachelor of Science in Education—Elementary Education (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 56-57
**Mathematics:** MA151
**Natural Science:** SC101, 102, 103, and 104 (1)
**Social Science:** GE101, 102, or 104 (one course), PC101
**Fine Arts:** TH101
**Liberal Studies electives:** MA152 (2); no courses with EL prefix; not to include HE218

**College:** 27
**Professional Education sequence: (3)**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 34
**Required courses:**

| | | |
|---|---|---|
| EL211 | Music for the Elementary Grades | 2sh |
| EL213 | Art for the Elementary Grades | 2sh |
| EL215 | Child Development | 3sh |
| EL221 | Children's Literature | 3sh |
| EL222 | Teaching of Reading I | 3sh |
| EL312 | Teaching of Elementary Science | 2sh |
| EL313 | Teaching Mathematics in the Elementary School | 3sh |
| EL314 | Teaching of Health and Physical Education | 2sh |
| EL257 | Pedagogy I | 3sh |
| EL357 | Pedagogy II | 3sh |
| EL411 | Teaching of Social Studies | 3sh |
| EL425 | Language Arts Across the Curriculum | 3sh |
| ED499 | Multicultural/Multiethnic Education | 2sh |

**Other Requirements:** 9
Special electives from a defined discipline (4)
**Biology:** BI103, 104, 150, 155, 232, 261, 265, 269, 272, 273
**Child Development/Family Relations:** HE220, 224, 317, 321, 324, 418, 422, 424, 426, 463
**Criminology:** CR101, 270, 357, 361
**Early Childhood:** EE200, 220, 310, 311, 312, 315
**Economics:** EC121, 122, 241
**Educational Psychology:** EP373, 376, 378
**English:** EN220, 310, 312, 324*, 330*, 333, 345, 348
[* = most highly recommended by English Department]. Add English course only at drop/add; see chairperson, English Department.
**French:** FR201, 202 (or 203), 221, 222, 321-322, 351-352
**Geoscience:** GS121, 123, 131, 133, 221, 336, 342, 361, 371, GE371
**History:** HI308, 311, 320, 321, 322, 326, 331, 340, 341, 342, 343, 360, 365, 369, 373
**Mathematics:** MA317, 420, 456, 457, 458, 459, 471, 483
**Philosophy:** PH101, 120, 222, 223, 323, 329, 330, 400, 405
**Psychology:** PC310, 311, 320, 371, 373
**Reading:** ED408, EL422, EE220 or 451
**Religious Studies:** RS100, 110, 200, 210, 250, 260, 290,311, 380
**Sociology:** SO333, 336, 337, 428
**Sociology (Urban Education):** SO333, 335, 339
**Spanish:** SP101, 102, 111, 201, 221, 222, 230, 321 or FLISET Program.

Students may also select a set of special electives from the list of Liberal Studies electives of non-Western courses that have not been used previously in their program.

**Total Degree Requirements:** 126-127

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) This sequence of ten credits fulfills the Liberal Studies natural science requirement.
(2) For students who test out of MA152, consult your advisor for suggested math courses.
(3) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX300 (2sh).
(4) More than twenty options are available for groupings in specific departments or cross-departmental areas. This requirement is also fulfilled by completion of an approved specialty such as FLISET, math, or reading. With permission of the chairperson of Professional Studies in Education and a specific department, a student may be allowed to create an area of specialty other than those listed. See department office for full listing; check prerequisites carefully. Submit plan to advisor for approval.

## Dual Certification

Students majoring in Education of Persons with Hearing Loss may complete academic requirements for certification in Elementary Education by completing the following requirements. Students are advised that completion of requirements for a second certification will take approximately two extra semesters.

### Dual Certification—Elementary Education for Majors in Education of Persons with Hearing Loss

| | | |
|---|---|---|
| ED342 | Pre-student Teaching Clinical Experience II (EL) | 1sh |
| ED421 | Student Teaching | 6sh (1) |
| EE312 | Aesthetic Experiences for Young Children | 3sh |
| EL221 | Children's Literature | 3sh |
| EL312 | Teaching of Elementary Science | 2sh |
| EL313 | Teaching Mathematics in the Elementary School | 3sh (2) |
| EL257 | Pedagogy I | 3sh |
| EL357 | Pedagogy II | 3sh |
| EL411 | Teaching of Social Studies | 3sh |
| EL425 | Language Arts Across the Curriculum | 3sh |

**Recommended electives:**

| | | |
|---|---|---|
| EL351 | Creative Activities in the Elementary School | 3sh |

(1) Students are required to do 6 semester hours of student teaching in the regular elementary classroom in addition to the 12 semester hours required in the EH major, or a total of 18 semester hours of student teaching inclusive for both certifications.
(2) MA152 is a prerequisite for EL313 and should be taken as a Liberal Studies elective.

Students majoring in Education of Exceptional Persons may complete academic requirements for certification in Elementary Education by completing the following requirements. Students are advised that completion of requirements for a second certification will take approximately two extra semesters.

### Dual Certification—Elementary Education for Majors in Education of Exceptional Persons

| | | |
|---|---|---|
| ED342 | Pre-student Teaching Clinical Experience II (EL) | 1sh |
| ED421 | Student Teaching | 6sh (1) |
| EE312 | Aesthetic Experiences for Young Children | 3sh |
| EL221 | Children's Literature | 3sh |
| EL312 | Teaching of Elementary Science | 2sh |
| EL313 | Teaching Mathematics in the Elementary School | 3sh (2) |
| EL257 | Pedagogy I | 3sh |
| EL357 | Pedagogy II | 3sh |
| EL411 | Teaching of Social Studies | 3sh |
| EL425 | Language Arts Across the Curriculum | 3sh |

**Recommended electives:**

| | | |
|---|---|---|
| EL351 | Creative Activities in the Elementary School | 3sh |

(1) Students are required to do 6 semester hours of student teaching in the regular elementary classroom in addition to the 12 semester hours required in the EX major, or a total of 18 semester hours of student teaching inclusive for both certifications.
(2) MA152 is a prerequisite for EL313 and should be taken as a Liberal Studies elective.

## Bachelor of Science in Education—Early Childhood Education (*) (@)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 56
**Mathematics:** MA151
**Natural Sciences:** SC101, 102, 103, and 104
**Social Science:** GE101, 102, or 104; PC101
**Liberal Studies electives:** no courses with EE prefix; not to include HE218

**College:** 27

**Professional Education sequence:**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 43

**Required courses: (1)**

| | | |
|---|---|---|
| ED499 | Multicultural/Multiethnic Education | 2sh |
| EE200 | Introduction to Early Childhood Education | 3sh |
| EE220 | Language Development and Children's Literature | 3sh |
| EE310 | Integrated Curriculum I (Math, Science) | 3sh |
| EE311 | Integrated Curriculum II (Social Science) | 3sh |
| EE312 | Aesthetic Experiences for Young Children | 3sh |
| EE315 | Development and Learning Through Play | 3sh |
| EE451 | Teaching Primary Reading | 3sh |
| EL215 | Child Development | 3sh |
| EL257 | Pedagogy I | 3sh |
| EL357 | Pedagogy II | 3sh |
| EX300 | Education of the Students with Disabilities in Inclusive Elementary Classrooms | 2sh |
| EX415 | Preschool Education for Children with Disabilities | 3sh |
| HE426 | Techniques of Parent Education | 3sh |
| MA320 | Mathematics for Early Childhood | 3sh |

**Free Electives:** 3

**Total Degree Requirements:** 129

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(@) To be implemented 1997-98, pending Council of Trustees approval
(1) A 2.5 overall grade-point average is required to register for major courses.

## Dual Certification

Students majoring in Education of Persons with Hearing Loss may complete academic requirements for certification in Early Childhood Education by completing the following requirements. Students are advised that completion of requirements for a second certification will take approximately two extra semesters.

## Dual Certification—Early Childhood Education for Majors in Education of Persons with Hearing Loss

| | | |
|---|---|---|
| ED242 | Pre-student Teaching Clinical Experience I (1) | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II (EE) | 1sh |
| ED421 | Student Teaching (N-3) (2) | 6sh |
| EE200 | Introduction to Early Childhood Education | 3sh |
| EE220 | Language Development and Children's Literature | 3sh |
| EE310 | Integrated Curriculum I | 3sh |
| EE311 | Integrated Curriculum II | 3sh |
| EE315 | Development and Learning Through Play | 3sh |
| EL357 | Pedagogy II | 3sh |
| MA320 | Mathematics for Early Childhood | 3sh |

**Recommended electives:**

| | | |
|---|---|---|
| EE312 | Aesthetic Experiences for Young Children | 3sh |
| EL351 | Creative Activities in the Elementary School | 3sh |

(1) EH majors must complete 10 hours of observation in an N-3 classroom.
(2) EH majors must complete 6 semester hours of student teaching in EE (N-3) in addition to the 12 semester hours required in the EH major, or a total of 18 semester hours of student teaching inclusive for both certifications.

Students majoring in Education of Exceptional Persons may complete academic requirements for certification in Early Childhood Education by completing the following requirements. Students are advised that completion of requirements for a second certification will take approximately two extra semesters.

## Dual Certification—Early Childhood Education for Majors in Education of Exceptional Persons

| | | |
|---|---|---|
| ED242 | Pre-student Teaching Clinical Experience I (1) | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II (EE) | 1sh |
| ED421 | Student Teaching (N-3) (2) | 6sh |
| EE200 | Introduction to Early Childhood Education | 3sh |
| EE220 | Language Development and Children's Literature | 3sh |
| EE310 | Integrated Curriculum I | 3sh |
| EE311 | Integrated Curriculum II | 3sh |
| EE315 | Development and Learning Through Play | 3sh |
| EL357 | Pedagogy II | 3sh |
| EX415 | Preschool Education for Children with Disabilities | 3sh |

**Recommended electives:**

| | | |
|---|---|---|
| EE312 | Aesthetic Experiences for Young Children | 3sh |
| EL351 | Creative Activities in the Elementary School | 3sh |

(1) EX majors must complete 10 hours of observation in an N-3 classroom.
(2) EX majors must complete 6 semester hours of student teaching in EE (N-3) in addition to the 12 semester hours required in the EX major, or a total of 18 semester hours of student teaching inclusive for both certifications.

## Foreign Languages and International Studies for Elementary Teaching (FLISET) (2)

Elementary Education/Early Childhood majors may develop an academic specialty in Spanish and International Studies, which will prepare them to teach in elementary programs where content teaching in the foreign language is the objective. To complete this specialty area, students must: (1) attain a minimum level of intermediate-high on the ACTFL/ETS scale; (2) successfully complete a six-week summer study/internship abroad at a site approved by the department (usually the summer following the junior year); (3) successfully complete the student teaching experience in a bilingual or immersion elementary school classroom; and (4) complete the following minimum number of credits in Spanish:

**Required courses:** 22 (1)

| | | |
|---|---|---|
| SP201 | Intermediate Spanish | 4sh |
| SP221 | Intermediate Spanish Conversation | 3sh |
| SP230 | Intermediate Spanish Composition | 3sh |
| SP290 | Intensive Spanish for Elementary Teaching | 3sh |
| SP321 | Advanced Spanish Conversation | 3sh |
| SP340 | Hispanic Civilization Through the 19th Century | 3sh |
| SP390 | Teaching of Elementary Content Through the Spanish Language | 3sh |

**Controlled elective: one course** 3

| | | |
|---|---|---|
| SPXXX | Elective (taken abroad) | 3sh |

**Other Requirements:**

| | |
|---|---|
| GE252, PS387, or AN474 as the non-Western course | 0 |
| Study/internship in Mexico for six to eight weeks the summer following junior year | 0-6sh |
| Student teaching experience in immersion classroom | 0sh |

(1) While the total number of credits required in Spanish in order to attain the desired proficiency level will vary from student to student depending on the entry level of proficiency, most students can expect to complete between twenty-five and thirty-one credits.
(2) Students interested in the program should contact the director of the FLISET Program in the Department of Spanish and Classical Languages or the FLISET coordinator in the Department of Professional Studies in Education.

## Department of Special Education and Clinical Services

**Richard C. Nowell, Chairperson; Bormann, Chapman, Domaracki, Ferrell, Fiddler, Glor-Sheib, Jackson, Klein, Marshak, Newell, Reber, Robertson, Smith, Stein, Turton; and professors emeriti M. Bahn, W. Bahn, Morris, Scanlon**

This department offers the degree of Bachelor of Science in Education in any one of four majors. Each of the four majors follows a prescribed sequence of courses. Students may elect to major in any one of the following fields:

A. Education of Exceptional Persons
B. Speech-Language Pathology and Audiology
C. Rehabilitation
D. Education of Persons with Hearing Loss

The following grade policy applies to all four undergraduate programs of study in the Department of Special Education and Clinical Services. Individual students may appeal any aspect of the policy by making a formal written request to the Departmental Appeals Committee.

1. No more than one "D" in major courses will be accepted toward graduation and certification.
2. No "D" is permitted as the final recorded grade in any of the following courses.
   ED421: Student Teaching
   ED441: Student Teaching
   EH308: Language for Persons with Hearing Loss
   EX425: Methods and Curriculum (Mild-Moderate Disabilities)
   EX435: Methods and Curriculum (Severe-Profound Disabilities)
   RH322: Rehabilitation Case Study and Interpretation
   RH488: Field Training in Rehabilitation
   RH493: Field Training in Rehabilitation
   SH122: Clinical Phonology

The following enrollment policy applies to three undergraduate programs in the Department of Special Education and Clinical Services: Education of Exceptional Persons, Education of Persons with Hearing Loss, and Speech-Language Pathology and Audiology. To enroll in a 300 or 400 level course in those programs, a student must have a cumulative QPA of 2.5 and must meet the other provisions of the four-step process for admission to teacher education and must either be a departmental major or have permission of the department chairperson.

### A. Education of Exceptional Persons

Completion of the sequence of study in this major leads to Pennsylvania Department of Education special education certification (Mentally and/or Physically Handicapped Certificate). Students will be prepared to teach persons with mental retardation, autism, developmental disabilities, learning disabilities, brain injuries, emotional/behavioral disorders, physical disabilities, and multiple disabilities. Academic coursework and field experiences are integrated within the course of study. The program also provides a foundation for pursuing additional study at the graduate level.

### Bachelor of Science in Education—Education of Exceptional Persons (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **54-55**
**Mathematics:** MA151
**Social Science:** PC101
**Natural Science:** laboratory science required (SC105-106 recommended)
**Liberal Studies electives:** no course with EX prefix

**College:** **27**

**Professional Education sequence:**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-Student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-Student Teaching Clinical Experience II | 1sh |
| ED421 | Student Teaching (Mild/Moderate) | 6sh |
| ED441 | Student Teaching (Severe/Profound) | 6sh |
| ED442 | School Law | 1sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** **43**

**Required courses:**

| | | |
|---|---|---|
| EX111 | Introduction to Exceptional Persons | 3sh |
| EX112 | Typical and Atypical Growth and Development | 3sh |
| EX221 | Methods of Teaching Mathematics to Persons with Disabilities | 3sh |
| EX222 | Methods of Teaching Reading to Persons with Disabilities | 3sh |
| EX231 | Methods of Teaching Content Area Subjects to Persons with Disabilities | 3sh |
| EX321 | Methods of Teaching Language Arts to Persons with Disabilities | 3sh (1) |
| EX340 | Introduction to Behavior Management in Special Education | 3sh |
| EX416 | Education of Persons with Emotional or Behavioral Disorders | 3sh |
| EX417 | Education of Persons with Mental Retardation or Developmental Disabilities | 3sh |
| EX418 | Education of Persons with Physical or Multiple Disabilities | 3sh |
| EX419 | Education of Persons with Brain Injuries or Learning Disabilities | 3sh |
| EX425 | Methods and Curriculum (Mild-Moderate Disabilities) | 3sh |
| EX435 | Methods and Curriculum (Severe-Profound Disabilities) | 3sh |
| EX440 | Ethical and Professional Behavior | 1sh |
| SH254 | Classroom Management of Language Disorders | 3sh |

**Total Degree Requirements:** **124-125**

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) A minimum QPA of 2.5 is required to enroll in 300 and 400 level major courses

### Dual Certification

Students majoring in Elementary Education or Early Childhood Education may complete academic requirements for certification in Education of Exceptional Persons by completing the following requirements. Students are advised that completion of requirements for a second certification will take approximately two extra semesters.

### Dual Certification—Education of Exceptional Persons

| | | |
|---|---|---|
| ED342 | Pre-student Teaching Clinical Experience II (EX) | 1sh |
| ED421 | Student Teaching (EX) | 6sh (1) |
| EX111 | Introduction to Exceptional Persons | 3sh |
| *or* | | |
| EX300 | Education of the Exceptional in the Regular Classroom | 3sh |
| EX416 | Education of Persons with Emotional or Behavioral Disorders | 3sh |
| EX417 | Education of Persons with Mental Retardation or Developmental Disabilities | 3sh |
| EX418 | Education of Persons with Physical or Multiple Disabilities | 3sh |
| EX419 | Education of Persons with Brain Injuries or Learning Disabilities | 3sh |
| EX425 | Methods and Curriculum (Mild-Moderate Disabilities) | 3sh |
| EX435 | Methods and Curriculum (Severe-Profound Disabilities) | 3sh |
| EX440 | Ethical and Professional Behavior | 1sh |
| **Recommended electives:** | | |
| EX340 | Introduction to Behavior Management in Special Education | 3sh |
| SH254 | Classroom Management of Language Disorders | 3sh |

(1) The 6 semester hours of student teaching in EX with students with severe and profound disabilities are in addition to the 12 semester hours normally required for Elementary Education or Early Childhood Education majors.

## B. Speech-Language Pathology and Audiology

Completion of the sequence of courses in Speech-Language Pathology and Audiology serves as a preprofessional program for students planning to become practicing speech-language pathologists or audiologists. Students entering the undergraduate program should be aware of the following:

1. IUP is accredited by the Educational Standards Board of the American Speech-Language-Hearing Association and qualifies a person for the Certificate of Clinical Competence from the American Speech-Language-Hearing Association and Pennsylvania State Licensure.
2. National certification, state licensure, and Pennsylvania Department of Education Certification in Speech-Language Impaired are available only to holders of the master's degree in Speech-Language Pathology.
3. Students will need to project a minimum QPA of 3.0 to qualify for admission to most graduate schools.
4. Upon completion of a master's degree at IUP, students will be prepared to provide services in work settings such as hospitals, community clinics, public health programs, and rehabilitation settings.
5. Students who elect to prepare for certification in Speech-Language Impaired from the Pennsylvania Department of Education must successfully complete the College of Education requirements listed below prior to enrollment in the Master of Science degree in the Speech-Language Pathology program at IUP.

The University Speech and Hearing Clinic serves as the laboratory for the undergraduate clinical practicum. Prior to registration for the clinical practicum course (SH420), students must earn a minimum QPA of 3.0 and complete the following hours of observation through enrollment in ED242 and ED342:

A. 25 hours of observation in speech-language pathology supervised by an IUP faculty member who holds a Certificate of Clinical Competence in Speech-Language Pathology.
B. 20 hours of classroom observation
   1. Five hours in regular education classrooms, K-3.
   2. Five hours in special education classrooms.
   3. Five hours in regular education classrooms with integrated special students.
   4. Five hours in community facilities such as preschools, sheltered workshops, etc. Services in this category should be of a noneducational nonspeech pathology type.

### Bachelor of Science in Education—Speech-Language Pathology and Audiology (*)

| | | | |
|---|---|---|---|
| **Liberal Studies:** As outlined in Liberal Studies section with the following specifications: | | | 54-55 |
| **Mathematics:** MA217 | | | |
| **Social Science:** PC101 | | | |
| **Natural Science:** laboratory science sequence required (BI103-104 recommended) | | | |
| **Liberal Studies electives:** PC310, no courses with SH prefix | | | |
| **College (*):** The following are required **ONLY** for students electing the pre-teacher certification track: | | | 0-13 |
| **Professional Education sequence:** | | | |
| CM301 | Technology for Learning Instruction | 3sh | |
| ED442 | School Law | 1sh | |
| EP202 | Educational Psychology | 3sh | |
| FE202 | American Education in Theory and Practice | 3sh | |
| SH412 | Organization and Administration of Speech and Hearing Programs | 3sh | |
| **Major:** | | | 38-41 |
| **Required courses:** | | | |
| ED242 | Pre-Student Teaching Clinical Experience I | 1sh | |
| ED342 | Pre-Student Teaching Clinical Experience II | 1sh | |
| EX111 | Introduction to Exceptional Persons | 3sh | |
| EX222 | Methods of Teaching Reading to Persons with Disabilities | 3sh | |
| SH111 | Introduction to Communication Disorders | 3sh | |
| SH122 | Clinical Phonology | 3sh | |
| SH222 | Introduction to Audiology | 3sh | |
| SH242 | Speech Science I | 3sh | |
| SH251 | Anatomy and Physiology of the Speech and Hearing Mechanism | 3sh | |
| SH311 | Aural Rehabilitation | 3sh (1) | |
| SH334 | Language Development | 3sh | |
| SH342 | Speech Science II | 3sh | |
| SH406 | Articulation and Language Disorders | 3sh | |
| SH408 | Stuttering and Voice Disorders | 3sh | |
| **Optional:** | | | |
| SH420 | Speech Clinic | 3sh | |
| **Free Electives:** ED499 recommended | | | |
| | General Track | | 28-32 |
| | Pre-Teacher Certification Track | | 15-19 |
| **Total Degree Requirements:** | | | 124 |

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

(1) A minimum QPA of 2.5 is required to enroll in all 300 and 400 level courses for both pre-teacher certification and noncertification speech-language pathology majors.

## C. Rehabilitation

Completion of this program leads to the Bachelor of Science with a specialization in rehabilitation. The program is designed for students seeking career opportunities with health and welfare agencies and institutions and also provides a foundation for pursuing additional work at the graduate level.

## Bachelor of Science—Rehabilitation

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54-55
**Mathematics:** MA217
**Natural Science:** Laboratory Science sequence required
**Social Science:** PC101, SO151
**Liberal Studies electives:** PC321, no courses with RH prefix

**Major:** 48
**Required courses:**

| | | |
|---|---|---|
| RH200 | Introduction to Rehabilitation | 3sh |
| RH211 | Medical Aspects of Rehabilitation | 3sh |
| RH220 | Neurological Basis of Disability | 3sh |
| RH312 | Psychological Basis of Disability | 3sh |
| RH321 | Principles and Methods of Rehabilitation | 3sh |
| RH322 | Rehabilitation Case Study and Interpretation | 3sh |
| RH360 | Rehabilitation Counseling: Strategies | 3sh |
| RH410 | Vocational Assessment in Rehabilitation Counseling | 3sh |
| RH412 | Occupational Aspects of Rehabilitation | 3sh |
| RH422 | Current Topics in Rehabilitation | 3sh |
| RH460 | Advanced Rehabilitation Counseling | 3sh |
| RH484 | Directed Rehabilitation Activities | 3sh |
| RH488 | Field Training in Rehabilitation I | 6sh |
| RH493 | Field Training in Rehabilitation II | 6sh |

**Other Requirements:** 6-7
**Required course:**

| | | |
|---|---|---|
| EX111 | Introduction to Exceptional Persons | 3sh |

**Controlled elective: (1)** 3-4sh
BI150, BI151, BI155, EH115, EH244, EH331, EX340, EX416, EX417, EX418, EX419, HP221, PC312, PC378, SO251, SO335

**Free Electives:** 14-16

**Total Degree Requirements:** 124

**(1)** Some Controlled Elective choices have prerequisites that may be used as free electives.

## D. Education of Persons with Hearing Loss

Completion of the sequence of courses in Education of Persons with Hearing Loss leads to a Bachelor of Science Degree in Education and Pennsylvania Department of Education certification as a "Teacher of the Hearing Impaired, K-12." Students are provided with the basic skills to teach in special classes for hard-of-hearing or deaf individuals.

Students enrolled in this sequence of study are prepared to assume positions as itinerant hearing therapists and classroom teachers for individuals ranging from preschoolers to adults. Work settings may include public schools, continuing education programs, and home training situations.

Observations, clinical experience, and practicum are required prior to placement in a school environment for the student teaching experience. The student will complete the following 50 hours of observation through enrollment in ED242.

A. 25 hours of observation of itinerant and self-contained classrooms for the hearing impaired.
B. 10 hours of observation in regular education classrooms.
C. 10 hours of observation in special education classrooms.
D. 5 hours of observation in a noneducational setting.

The student will complete 30 hours of individual clinical experience through enrollment in EH329 and EH330 and 25 hours of school-based practicum through enrollment in ED342.

## Bachelor of Science in Education—Education of Persons with Hearing Loss (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54-55
**Mathematics:** MA151
**Social Science:** PC101
**Natural Science:** Laboratory Science sequence required
**Liberal Studies electives:** no courses with EH prefix

**College:** 30
**Professional Education sequence:**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED421 | Student Teaching-Hearing Impaired (Pri-Elem) | 6sh |
| ED441 | Student Teaching-Hearing Impaired (Jr-Sr H.S.) | 6sh |
| ED442 | School Law | 1sh |
| EH360 | General Methodology for Education of Persons with Hearing Loss | 3sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh (1) |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 38
**Required courses:**

| | | |
|---|---|---|
| EH114 | Introduction to Persons with Hearing Loss | 3sh |
| EH115 | Introduction to Sign Language | 1sh |
| EH244 | Intermediate Sign Language | 1sh |
| EH307 | Speech for Persons with Hearing Loss | 3sh (2) |
| EH308 | Language for Persons with Hearing Loss | 3sh |
| EH329 | Hearing Practicum I | 1sh |
| EH330 | Hearing Practicum II | 1sh |
| EH331 | Advanced Sign Language | 1sh |
| EH351 | Teaching Reading to Persons with Hearing Loss | 3sh |
| EH365 | Parent-Preschool Programs for Persons with Hearing Loss | 3sh |
| EX111 | Introduction to Exceptional Persons | 3sh |
| SH222 | Introduction to Audiology | 3sh |
| SH242 | Speech Science I | 3sh |
| SH311 | Aural Rehabilitation | 3sh (2) |
| SH334 | Language Development | 3sh (2) |

**Controlled electives:**
One course from: EX112 or EL215 or HE218 3sh

**Free Electives:** 1-2

**Total Degree Requirements:** 124

**(*)** See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
**(1)** MA217 Probability and Statistics may substitute for EP377 but may not replace MA151.
**(2)** A minimum QPA of 2.5 is required to enroll in all 300 and 400 level major courses.

## Dual Certification

Students majoring in Early Childhood Education may complete academic requirements for certification in Education of Persons with Hearing Loss by completing the following requirements. Students are advised that completion of requirements for a second certification will take approximately two extra semesters.

### Dual Certification—Education of Persons with Hearing Loss for Majors in Early Childhood Education

| | | |
|---|---|---|
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED421 | Student Teaching (1) (EH) | 6sh |
| EH114 | Introduction to Persons with Hearing Loss | 3sh |
| EH115 | Introduction to Sign Language | 1sh |
| EH244 | Intermediate Sign Language | 1sh |
| EH307 | Speech for Persons with Hearing Loss | 3sh |
| EH308 | Language for Persons with Hearing Loss | 3sh |
| EH329 | Hearing Practicum I | 1sh |
| EH330 | Hearing Practicum II | 1sh |
| EH331 | Advanced Sign Language | 1sh |
| EH365 | Parent-Preschool Programs for Persons with Hearing Loss | 3sh |
| SH222 | Introduction to Audiology | 3sh |
| SH311 | Aural Rehabilitation | 3sh |

**Recommended electives:**

| | | |
|---|---|---|
| EH351 | Teaching Reading to Persons with Hearing Loss | 3sh |
| SH242 | Speech Science I | 3sh |
| SH334 | Language Development | 3sh |

(1) Student Teaching Configuration—In addition to their regular requirement of 12 semester hours in Early Childhood Education, dual certification students must do an extra six-credit placement. The recommended pattern is as follows:

- 6 semester hours in K-3 regular classroom
- 6 semester hours in K-3 classroom with deaf and/or hard-of-hearing pupils included
- 6 semester hours in upper school classroom with deaf and/or hard-of-hearing pupils
- Total = 18 credits inclusive for both certifications

Students majoring in Elementary Education may complete academic requirements for certification in Education of Persons with Hearing Loss by completing the following requirements. Students are advised that completion of requirements for a second certification will take approximately two extra semesters.

### Dual Certification—Education of Persons with Hearing Loss for Majors in Elementary Education

| | | |
|---|---|---|
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED421 | Student Teaching (1) (EH) | 6sh |
| EH114 | Introduction to Persons with Hearing Loss | 3sh |
| EH115 | Introduction to Sign Language | 1sh |
| EH244 | Intermediate Sign Language | 1sh |
| EH307 | Speech for Persons with Hearing Loss | 3sh |
| EH308 | Language for Persons with Hearing Loss | 3sh |
| EH329 | Hearing Practicum I | 1sh |
| EH330 | Hearing Practicum II | 1sh |
| EH331 | Advanced Sign Language | 1sh |
| EH351 | Teaching Reading to Persons with Hearing Loss | 3sh |
| SH222 | Introduction to Audiology | 3sh |
| SH311 | Aural Rehabilitation | 3sh |

**Recommended electives:**

| | | |
|---|---|---|
| SH242 | Speech Science I | 3sh |
| SH334 | Language Development | 3sh |

(1) **Student Teaching Configuration**—In addition to their regular requirement of 12 semester hours in Elementary Education, dual certification students must do an extra six-credit placement. The recommended pattern is as follows:

- 6 semester hours in a regular elementary classroom
- 6 semester hours in an elementary classroom with deaf and/or hard-of-hearing pupils included
- 6 semester hours in upper school classroom with deaf and/or hard-of-hearing pupils
- Total = 18 credits inclusive for both certifications

# The College of Fine Arts

**Charles E. Cullum**, Interim Dean
**Douglas E. Bish**, Associate Dean

The College of Fine Arts has professional programs in art, music, and theater and awards the Bachelor of Arts and Bachelor of Fine Arts degrees. Programs leading to certification to teach are offered in cooperation with the College of Education and lead to the Bachelor of Science degree. The college offers minors in art, music, theater, and dance.

With one of the largest arts programs in the commonwealth, IUP's College of Fine Arts offers members of both the university and the extended community many opportunities to learn and grow. Dedicated facilities for each department are augmented by a 1,600-seat auditorium, two theaters, two art galleries, a university museum, a recital hall, a computer laboratory, and a dance studio. Typically, the college sponsors two hundred to three hundred arts events annually, and our students, who currently enjoy the strongest academic profile of any of the university's colleges, have opportunities to develop their talents locally, regionally, and even nationally through a variety of long-established field-based programs.

There are four objectives for the College of Fine Arts:

1) to provide special academic programs for majors in the arts
2) to provide service courses for other departmental majors
3) to offer all university students general courses in the arts
4) to make cultural programs in the arts available to the university, the surrounding community, and the local region

There are no additional college requirements for graduation beyond the university and departmental requirements listed in other sections of this catalog.

## College Majors

Art (History or Studio Track)
Art Education
General Fine Arts
Music (History and Literature, Performance, or Theory and Composition Track)
Music Education
Theater

## General Fine Arts Major

A general fine arts major program is available for those students desiring to take coursework in art, dance, interior design, media, music, and theater. This program is offered in conjunction with the College of Education and the College of Health and Human Services. This interdisciplinary program, including an opportunity for an internship (FA493), is coordinated through the Office of the Dean, College of Fine Arts, where additional information is available.

### Bachelor of Arts—General Fine Arts

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-55**
**Liberal Studies electives:** no courses with FA prefix

**Major:** **36**
**Required courses:**
Courses must come from three departments, one of which must be Art, Music, or Theater

**Controlled electives:**
**Art:** Art Education (AE), Art History (AH), Art Studio (AR)
**Music:** Music (MU), Music History (MH), or Applied Music (AM)
**Theater:** Any Theater (TH) courses
**Consumer Services:** Interior Design courses (CS)

**Communications Media:** Any courses (CM)
**Dance:** (HP) Dance courses

**Other Requirements:** 0
At least one-third (12) of the major credits must be in courses numbered in the 300s and 400s. No course that is used to fulfill Liberal Studies requirements may be used again to meet major requirements.

**Free Electives:** 33-35

**Total Degree Requirements:** 124

## Department of Art

**Anthony G. DeFurio, Chairperson; Ali, Ben-Zvi, Boerner, Burwell, Ciganko, Clay, Hamilton, Hanson, Hedman, Lacey, Mitchell, Nestor, Palmisano, J. Slenker, R. Slenker, Villalobos, Weiland; and professors emeriti Balsiger, Battaglini, Dongilla, Dropcho, Innes, Johnson, McVitty, Seelhorst, Vislosky, Wert**

The Department of Art provides both general and special courses in art, directed toward the development of the student's creative and expressive abilities. Degrees offered are the Bachelor of Arts with tracks in either Art History or Art Studio, the Bachelor of Fine Arts in Art Studio, and the Bachelor of Science in Education in Art Education. The degree in art education provides certification for teaching art in grades K-12 in the schools of Pennsylvania.

The Department of Art offers a cooperative program with the Art Institute of Pittsburgh. Students interested in commercial art, with departmental approval, may earn credit toward their major at the Art Institute.

All art majors are obligated to fulfill the university requirements for Liberal Studies. Art education majors must maintain a 2.5 average overall QPA, and this is a prerequisite to student teaching.

A minor in art is available, consisting of at least 18 semester hours in art courses approved by the chairperson of the Department of Art.

Acceptance by the Department of Art as a major requires the submission of a portfolio and approval of the portfolio committee. Detailed information will be sent to the applicant upon request.

### Bachelor of Arts—Art/History Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Fine Arts:** MH101 or TH101
**Liberal Studies electives:** no courses with AH prefix

**Major:**

**Foundation required:** 15

| | | |
|---|---|---|
| AR100 | Arts of the 20th Century | 3sh |
| AR111 | Figure Drawing | 3sh |
| AR112 | Fundamentals of Drawing | 3sh |
| AR113 | Three-Dimension Design | 3sh |
| AR114 | Color and Two-Dimensional Design | 3sh |

**Art History required:** 30

| | | |
|---|---|---|
| AH205 | Ancient to Medieval Art | 3sh |
| AH206 | Renaissance to Baroque Art | 3sh |
| AH211 | Modern Art | 3sh |
| AH222 | Art in America | 3sh |
| AH407 | Medieval Art | 3sh |
| AH408 | Italian Renaissance Art | 3sh |
| AH409 | Baroque and Rococo Art | 3sh |
| AH412 | Classical Art | 3sh |
| AH413 | Senior Seminar (to be taken during senior year) | 3sh |
| AH416 | Northern Renaissance Art | 3sh |

**Free Electives: (1)** 24-26

| | | |
|---|---|---|
| AH406 | Ancient Migratory Art | 3sh |
| AH424 | Art of the East | 3sh |
| AH426 | Pre-Columbian Art | 3sh |
| AH493 | Internship | 3-12sh |

**Total Degree Requirements:** 124

(1) It is recommended that the student of art history make judicious choices of elective courses in consultation with the major advisor. Students may consider additional foundation or advanced studio electives, advanced art history, and related academic electives. Course selection in a foreign language is strongly recommended.

### Bachelor of Arts—Art/Studio

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50-52
**Fine Arts:** Fulfilled by Art History counted in major
**Liberal Studies electives:** AH206; no courses with AR prefix

**Major:**

**Foundation required:** 15

| | | |
|---|---|---|
| AR100 | Arts of the 20th Century | 3sh |
| AR111 | Figure Drawing | 3sh |
| AR112 | Fundamentals of Drawing | 3sh |
| AR113 | Three-Dimension Design | 3sh |
| AR114 | Color and Two-Dimensional Design | 3sh |

**Foundation electives: (Select 5 of the following 8 courses)** 15

| | | |
|---|---|---|
| AR211 | Painting | 3sh |
| AR213 | Woodworking: Function and Form | 3sh |
| AR214 | Ceramics | 3sh |
| AR215 | Sculpture | 3sh |
| AR216 | Basic Metal Techniques | 3sh |
| AR217 | Printmaking | 3sh |
| AR218 | Graphic Design | 3sh |
| AR219 | Fibers | 3sh |

**Art History required:** 9

| | | |
|---|---|---|
| AH205 | Ancient to Medieval Art | 3sh (1) |
| AH206 | Renaissance to Baroque Art | 3sh (2) |
| AH211 | Modern Art | 3sh (3) |
| AH413 | Senior Seminar (To be taken during senior year) | 3sh |

**Advanced Studio required: (4)** 21
Advanced Studio courses to be selected from list:
AR421, 451, 452, 453, 454, 455, 457, 459, 460, 481, 493 (5)

**Free Electives:** 12-14

**Total Degree Requirements:** 124

(1) Credits counted in Liberal Studies Fine Arts requirement.
(2) Credits counted under Liberal Studies electives.
(3) AH222 may be substituted for AH211.
(4) Students must complete three credits within an advanced studio before permission will be granted to enroll in the six-credit component of the advanced level. Permission of the instructor is a prerequisite to all six-credit advanced studios.
(5) Inclusion of internship credits toward any portion of fulfillment of degree requirements must be approved by the departmental chair and student's major advisor. Approval must be obtained in writing prior to enrollment.

### Bachelor of Fine Arts—Studio

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50-52
**Fine Arts:** Fulfilled by Art History counted in major
**Liberal Studies electives:** AH206, no courses with AR elective

**Major:**

**Foundation required:** 15

| | | |
|---|---|---|
| AR100 | Arts of the 20th Century | 3sh |
| AR111 | Figure Drawing | 3sh |
| AR112 | Fundamentals of Drawing | 3sh |
| AR113 | Three-Dimension Design | 3sh |
| AR114 | Color and Two-Dimensional Design | 3sh |

| | | | |
|---|---|---|---|
| **Foundation electives: (Select 5 of the following 8 courses)** | | | **15** |
| AR211 | Painting | 3sh | |
| AR213 | Woodworking: Function and Form | 3sh | |
| AR214 | Ceramics | 3sh | |
| AR215 | Sculpture | 3sh | |
| AR216 | Basic Metals | 3sh | |
| AR217 | Printmaking | 3sh | |
| AR218 | Graphic Design | 3sh | |
| AR219 | Fibers | 3sh | |
| **Art History required:** | | | **9** |
| AH205 | Ancient to Medieval Art | 3sh (1) | |
| AH206 | Renaissance to Baroque Art | 3sh (2) | |
| AH211 | Modern Art | 3sh (3) | |
| AH413 | Senior Seminar | 3sh | |
| **Advanced Studio required: (4)** | | | |
| Primary Advanced Studio Concentration | | | **27** |
| Minor Advanced Studio Concentration | | 18sh | |
| Courses from list: AR421, 451, 452, 453, 454, 455, 457, 459, 460, 481, 493 (5) | | | |
| **Free electives:** | | | **6-8** |
| **(#) Total Degree Requirements:** | | | **124-126** |

(1) Credits counted in Liberal Studies Fine Arts requirement.
(2) Credits counted under Liberal Studies electives.
(3) AH222 may be substituted for AH211.
(4) The foundation-level course must be successfully completed before a student will be permitted to enroll in the six-credit component of that specific studio course. Permission of the instructor is a prerequisite to all six-credit advanced studios.
(5) Inclusion of internship credits toward any portion of fulfillment of degree requirements must be approved by the departmental chair and student's major advisor. Approval must be obtained in writing prior to enrollment.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

## Bachelor of Science in Education—Art Education (*)

| | | | |
|---|---|---|---|
| **Liberal Studies:** As outlined in Liberal Studies section with the following specifications: | | | **50-52** |
| **Fine Arts:** Fulfilled by Art History counted in major. | | | |
| **Social Science:** PC101 | | | |
| **Liberal Studies electives:** AH206, no courses with AR prefix | | | |
| **College:** | | | |
| **Professional Education sequence: (1)** | | | **24** |
| CM301 | Technology for Learning and Instruction | 3sh | |
| ED421 | Student Teaching Elementary | 6sh | |
| ED441 | Student Teaching Secondary | 6sh | |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh | |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh | |
| ED442 | School Law | 1sh | |
| EP202 | Educational Psychology | 3sh | |
| FE202 | American Education in Theory and Practice | 3sh | |
| **Major:** | | | |
| **Foundation required:** | | | **15** |
| AR100 | Arts of the 20th Century | 3sh | |
| AR111 | Figure Drawing | 3sh | |
| AR112 | Fundamentals of Drawing | 3sh | |
| AR113 | Three-Dimension Design | 3sh | |
| AR114 | Color and Two-Dimensional Design | 3sh | |
| **Foundation electives: (Select 5 of the following 8 courses)** | | | **15** |
| AR211 | Painting | 3sh | |
| AR213 | Woodworking: Function and Form | 3sh | |
| AR214 | Ceramics | 3sh | |
| AR215 | Sculpture | 3sh | |
| AR216 | Basic Metals | 3sh | |
| AR217 | Printmaking | 3sh | |
| AR218 | Graphic Design | 3sh | |
| AR219 | Fibers | 3sh | |
| **Art Education required:** | | | **9** |
| AE315 | Survey of Art Education | 3sh | |
| AE317 | Art Education Methodology at the Elementary Level | 3sh | |
| AE318 | Art Education Methodology at the Secondary Level | 3sh | |
| **Art History required:** | | | **9** |
| AH205 | Ancient to Medieval Art | 3sh (2) | |
| AH206 | Renaissance to Baroque Art | *sh (3) | |
| AH211 | Modern Art | 3sh (4) | |
| AH413 | Senior Seminar | 3sh | |
| **Controlled electives:** | | | **12** |
| **Additional courses from lists:** (5) | | | |
| **Advanced Studio:** AR421, 451, 452, 453, 454, 455, 457, 459, 460 | | | |
| **Advanced Art History:** AH219, 222, 406, 408, 409, 412, 416, 424, 426 | | | |
| **Art Education elective:** AE330 | | | |
| **Free Electives:** | | | **0** |
| **(#) Total Degree Requirements:** | | | **134-136** |

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).
(2) Credits counted in Liberal Studies Fine Arts requirement.
(3) Credits counted under Liberal Studies electives.
(4) AH222 may be substituted for AH211.
(5) Courses can only be taken following successful completion of the foundation prerequisite course.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

# Department of Music

**John F. Scandrett, Chairperson; Adams, Bird, Borst, Casavant, Chepaitis, Dearing, Dickinson, Dietz, Fry, Godt, Intili, Kauffman, Kuehn, Lloyd, Luchsinger, Mantel, McBride, Olmstead, Perlongo, Radell, Sartori, Stamp, Staples, Teti, Thorell, Wheatley, Wilson, Wulfhorst; and professors emeriti Becker, DiCicco, Malitsky, Perkins, Vansteenkist**

The Department of Music has a threefold mission: (1) professional preparation of music educators and performers, (2) liberal studies for the university, and (3) programs of music for the community. Degrees offered include the Bachelor of Arts, Bachelor of Fine Arts, and Bachelor of Science in Education.

Admission to the Music Department requires satisfactory completion of an audition in addition to the university general requirements. Detailed information will be sent to the applicant upon request.

A student wishing to minor in music must elect a minimum of 15 semester hours in music courses as approved by the department chairperson. The program leading to the Bachelor of Arts in music has been designed to give the student a general experience in music. The student seeking this degree has the choice of four tracks: Music History/Literature, Music Theory/Composition, Performance, or Jazz Studies.

The program leading to the Bachelor of Fine Arts in Music (equivalent to the Bachelor of Music Degree) is a special program with a major in one of twenty-one areas of performance. The student in this program prepares to pursue a career as a professional performing musician.

The program leading to the Bachelor of Science in Education with a music major leads to certification to teach in the schools of Pennsylvania.

## Special Requirements

1. Each student must declare a primary performing medium. Those who elect voice as their primary instrument normally elect piano as a secondary instrument; those who elect piano as their primary instrument normally elect voice as their secondary instrument. Performance juries are held at the end of each semester. Students are

expected to complete the requirements for their performing area and level. Piano proficiency is required in all degree programs.
2. Ensemble participation of 5 hours a week is required each semester. Students may fulfill this departmental requirement by participation in either one-credit or zero-credit ensemble(s). In meeting the degree requirements of 7-8 semester hours of ensemble credit, enrollment in credit-bearing ensembles is flexible across semesters.
3. Students must register for MU475 (Music Lab) and attend (1) all department and area recitals and (2) eight campus recitals and concerts each semester.

## Bachelor of Arts—Music/History and Literature Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Mathematics:** MA101 recommended
**Fine Arts:** MH101
**Liberal Studies electives:** HI305, no courses with MH prefix

**Major:** 41
**Required courses:**

| | | |
|---|---|---|
| MU111 | Theory Skills I | 2sh |
| MU112 | Theory Skills II | 2sh |
| MU115 | Theory I | 3sh |
| MU116 | Theory II | 3sh |
| MU211 | Theory Skills III | 2sh |
| MU212 | Theory Skills IV | 2sh |
| MU215 | Theory III | 3sh |
| MU216 | Theory IV | 3sh |
| MH301 | Music History I | 3sh |
| MH302 | Music History II | 3sh |

**Controlled electives:** 15sh
Five courses from this list: MH320, 321, 322, 323, 324, 325, 326, 420, 421

**Other Requirements:** 15

| | |
|---|---|
| Music Ensembles (MU120-136) | 8sh |
| Music Electives | 7sh |
| Jury Clearance in piano C | 0sh |
| Attendance at 8 recitals per semester (MU475, S grade, 8 semesters) | 0sh |

**Free Electives:** 13-15

**Total Degree Requirements:** 124

## Bachelor of Arts—Music/Music Performance Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Mathematics:** MA101 recommended
**Fine Arts:** MH101
**Liberal Studies electives:** HI305, MH301, no courses with MU prefix

**Major:** 42
**Required courses:**

| | | |
|---|---|---|
| MU111 | Theory Skills I | 2sh |
| MU112 | Theory Skills II | 2sh |
| MU115 | Theory I | 3sh |
| MU116 | Theory II | 3sh |
| MU211 | Theory Skills III | 2sh |
| MU212 | Theory Skills IV | 2sh |
| MU215 | Theory III | 3sh |
| MU216 | Theory IV | 3sh |

**Controlled electives:**

| | |
|---|---|
| Applied Music I through VIII: private lessons in performance areaC2sh each of eight semesters | 16sh |

**Major related:**

| | | |
|---|---|---|
| MH103 | Perspectives in Jazz | 3sh |
| MH302 | Music History II | 3sh |

**Other Requirements:** 14

| | |
|---|---|
| Music ensembles (MU120-136) | 8sh |
| Music electives, with advisor approval | 6sh |
| Jury clearance in major instrument, minor instrument (if any), and piano (if not major or minor instrument) | 0sh |
| Attendance at 8 recitals per semester (MU475, S grade, 8 semesters) | 0sh |

**Free Electives:** 13-15

**Total Degree Requirements:** 124

## Bachelor of Arts—Music/Theory and Composition Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Mathematics:** MA101 recommended
**Fine Arts:** MH101
**Liberal Studies electives:** HI305, MH301, no courses with MU prefix

**Major:** 54
**Required courses:**

| | | |
|---|---|---|
| MU111 | Theory Skills I | 2sh |
| MU112 | Theory Skills II | 2sh |
| MU115 | Theory I | 3sh |
| MU116 | Theory II | 3sh |
| MU211 | Theory Skills III | 2sh |
| MU212 | Theory Skills IV | 2sh |
| MU215 | Theory III | 3sh |
| MU216 | Theory IV | 3sh |
| MU217 | Keyboard Harmony I | 1sh |
| MU218 | Keyboard Harmony II | 1sh |
| MU306 | Counterpoint I | 2sh |
| MU315 | Theory V | 3sh |
| MU411 | Composition I | 2sh |
| MU412 | Composition II | 2sh |
| MU413 | Composition III | 2sh |
| MU414 | Composition IV | 2sh |

**Controlled electives:**

| | |
|---|---|
| One from list: MU304, 307, 309 | 2sh |
| Applied Music I-VII: Private lessons in performance area—2sh each of seven semesters | 14sh |
| Major related: MH302 | 3sh |

**Other Requirements:** 8

| | |
|---|---|
| Music ensembles (MU120-136) | 8sh |
| Jury clearance in major instrument, minor instrument (if any), and piano B | 0sh |
| Attendance at 8 recitals per semester (MU475, S grade, 8 semesters) | 0sh |

**Free Electives:** 7-9

**Total Degree Requirements:** 124

## Bachelor of Fine Arts—Music Performance

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Mathematics:** MA101 recommended
**Fine Arts:** MH101
**Liberal Studies electives:** HI305, MH301, no courses with MU prefix

**Major:** 55
**Required courses:**

| | | |
|---|---|---|
| MU111 | Theory Skills I | 2sh |
| MU112 | Theory Skills II | 2sh |
| MU115 | Theory I | 3sh |
| MU116 | Theory II | 3sh |
| MU211 | Theory Skills III | 2sh |
| MU212 | Theory Skills IV | 2sh |
| MU215 | Theory III | 3sh |
| MU216 | Theory IV | 3sh |

**Controlled electives:**

| | |
|---|---|
| Applied Music I through VIII: private lessons in performance area—4sh each of 8 semesters | 32sh |
| Major related: MH302 | 3sh |

| | | |
|---|---|---|
| **Other Requirements:** | | **20** |
| Music ensembles (MU120-136) | 8sh | |
| Music electives | 12sh (1) | |
| Jury clearance in major instrument, minor instrument (if any), and piano C (unless major or minor) | 0sh | |
| Attendance at 8 recitals per semester (MU475. S grade. 8 semesters) | 0sh | |
| Junior and Senior Recitals | 0sh | |
| **Free Electives:** | | **0** |
| **(#) Total Degree Requirements:** | | **128-130** |

1. Majors with piano or organ performance specialization must elect MU 217 and MU 218: Keyboard Harmony I and II. 1 sh each.

(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

## Bachelor of Science in Education—Music Education (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-55**
**Mathematics:** MA101 recommended
**Fine Arts:** MH101
**Social Science:** PC101
**Liberal Studies electives:** HI305, MH301, no courses with MU prefix

| | | | |
|---|---|---|---|
| **College:** | | | **30** |
| **Professional Education sequence: (1)** | | | |
| CM301 | Technology for Learning and Instruction | 3sh | |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh | |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh | |
| ED421 | Student Teaching Elementary Level | 6sh | |
| ED441 | Student Teaching Secondary Level | 6sh | |
| ED442 | School Law | 1sh | |
| EP202 | Educational Psychology | 3sh | |
| FE202 | American Education in Theory and Practice | 3sh | |
| MU331 | Elementary Methods | 3sh | |
| MU333 | Secondary Methods | 3sh | |
| **Major:** | | | **49** |
| **Required courses:** | | | |
| MU111 | Theory Skills I | 2sh | |
| MU112 | Theory Skills II | 2sh | |
| MU115 | Theory I | 3sh | |
| MU116 | Theory II | 3sh | |
| MU211 | Theory Skills III | 2sh | |
| MU212 | Theory Skills IV | 2sh | |
| MU215 | Theory III | 3sh | |
| MU216 | Theory IV | 3sh | |
| MU151-152 | Class Voice I and II | 2sh (2) | |
| MU153-154 | Class Piano I and II | 2sh (3) | |
| MU155 | Class Strings I | 1sh | |
| MU157 | Class Percussion I | 1sh | |
| MU159 | Class Brass I | 1sh | |
| MU161 | Class Woodwinds I | 1sh | |
| MU311 | Fundamentals of Conducting | 2sh | |
| **Controlled electives:** | | | |
| One from list: MU312 or 313 | | 2sh | |
| Applied Music I through VII: private lesson in Performance area—2sh each of seven semesters | | 14sh | |
| Major related: MH302 | | 3sh | |
| **Other Requirements:** | | | **7** |
| Music Ensembles (MU120-136) | | 7sh | |
| Jury clearance in major instrument, minor instrument (if any) and piano C (unless major or minor) | | 0sh | |
| Attendance at 8 recitals per semester (MU475, S grade, 7 semesters) | | 0sh | |
| **Free Electives:** | | | **0** |
| **(#) Total Degree Requirements:** | | | **139-141** |

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, *"Admission to Teacher Education."*

(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).

(2) For majors with voice as performance specialization, any three of the following may be substituted: MU351, 353, 354, 406.

(3) Private Piano I and II (AM101, 151) may be substituted.

(#) See advisory paragraph *"Timely Completion of Degree Requirements"* in catalog section on Requirements for Graduation.

# Department of Theater

**Annie-Laurie Wheat, Chairperson; Ault, Blackledge, Boda, Bowes, Jones, Lommock, McCreary, Simpson; and professors emeriti Eisen, Ensley**

The Department of Theater is dedicated to theater as a collaborative and highly disciplined fine art that demands a broad-based education and offers a wide view of the world as a part of a liberal and humanistic education. Students wishing to share in this will find the Department of Theater committed to the following:

I. providing comprehensive coursework from introductory through advanced levels of study, in all major areas of theater
II. providing production opportunities to develop and enhance expertise, as well as stimulate artistic and intellectual growth of both the students and the faculty
III. augmenting and complementing the aesthetic offerings of the university community

The Department of Theater offers a Bachelor of Arts degree as well as minors in both theater and dance. The department offers courses in theater history, drama, and criticism as well as basic and advanced coursework in acting, dance/movement, voice, directing, design, and technical theater. A minor in theater consists of 15 semester hours in coursework approved by the chairperson of the Department of Theater. The requirements for the minor in dance are outlined elsewhere.

As a practical extension of the academic program, the Department of Theater offers a variety of production opportunities in the Theater-by-the-Grove Mainstage and Studio theaters. The IUP Dance Theater performs twice annually, and the department has a professional theater company, Summer Theater-by-the-Grove, to offer students summer options.

Admission to the Department of Theater requires satisfactory completion of an audition or interview, in addition to the university's general admission requirements. Detailed information will be sent to applicants upon request.

The Department of Theater is an accredited institutional member of the National Association of Schools of Theater (NAST).

## Bachelor of Arts—Theater

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-55**
**Fine Arts:** AH101. MH101, or TH102
**Liberal Studies electives:** no courses with TH prefix

| | | | |
|---|---|---|---|
| **Major:** | | | **36** |
| **Required courses:** | | | |
| TH110 | Script Analysis | 3sh | |
| TH116 | Fundamentals of Theatrical Design | 3sh | |
| TH201 | Theater History I | 3sh | |
| TH202 | Theater History II | 3sh | |
| TH301/302 | Tragic Mask or Comic Mask | 3sh | |
| TH310 | Theater Criticism | 3sh | |
| **Any three of the following:** | | | |
| TH120 | Stagecraft I | 3sh | |
| TH122 | Costume Workshop | 3sh | |
| TH221 | Basic Stage Lighting | 3sh | |
| TH223 | Makeup for the Stage | 3sh | |

| | | | |
|---|---|---|---|
| **Any three of the following:** | | | |
| TH130 | Stage Voice | 3sh | |
| TH131/150 | Stage Movement or Fundamentals of Dance | 3sh | |
| TH240 | Acting I | 3sh | |
| TH350 | Directing | 3sh | |
| **Other Requirements:** | | | 4 |
| TH486 | Practicum in Production (minimum of six semesters) | 4sh | |
| **Free Electives:** | | | **29-31** |
| **Total Degree Requirements:** | | | **124** |

## Dance Minor

The Dance Minor program provides a foundation for those interested in teaching dance, working with a dance company, managing a private dance studio, working with theater productions, or desiring a broad-based education within the dance discipline.

The Dance Minor is an eighteen-credit program with nine required credits and nine elective credits. The required credits include the pertinent foundation courses and higher-level theory courses. The required courses also provide design elements of production, fundamental and historical theories of dance, and dance choreographic and teaching theories that cannot be obtained in any of the elective courses. The elective credits include the technique courses.

The Dance Minor is based on the National Standards for Arts Education dance requirements. Using this basis for the program ensures fundamental preparation for a number of student needs, for example: the dance teacher, the performer, and/or the dance studio owner.

The program is also designed to fulfill the needs of a Liberal Arts minor in dance. Through advisement, the minor program can serve the individual student's needs. The program would be of interest to secondary elementary, elementary education majors, small business majors, recreation and physical education majors, and anyone else who has an interest in dance and wants to broaden his or her Liberal Arts education.

### Minor—Dance (1)

| | | | |
|---|---|---|---|
| **Required Courses:** | | | 9 |
| TH116 | Fundamentals of Theatrical Design | 3sh | |
| **One of the following:** | | | |
| TH102 | Introduction to Dance | 3sh | |
| TH150 | Fundamentals of Dance | 3sh | |
| **One of the following:** | | | |
| TH351 | Choreography | 3sh | |
| TH353 | Dance Curriculum and Instruction | 3sh | |
| **Any three of the following as advised:** | | | 9 |
| TH150 | Fundamentals of Dance | 3sh | |
| TH250 | Contemporary Dance | 3sh | |
| TH260 | Jazz Dance | 3sh | |
| TH270 | Ballroom and Tap Dance | 3sh | |
| TH280 | Ballet | 3sh | |
| TH290 | Ethnic Dance | 3sh | |
| TH485 | Dance Studio | 3sh | |
| **Total credits:** | | | 18 |

(1) The Dance Minor consists of eighteen credits. Fundamentals of Dance cannot be counted twice.

# The College of Health and Human Services

**Harold E. Wingard**, Dean
**Carleen C. Zoni**, Associate Dean

The College of Health and Human Services is composed of seven academic departments: Food and Nutrition; Health and Physical Education; Hotel, Restaurant, and Institutional Management; Human Development and Environmental Studies; Industrial and Labor Relations; Nursing and Allied Health Professions; and Safety Sciences. Each department provides theoretical, laboratory, and practical experiences for students and prepares them for selected careers.

Faculty members of the college hold advanced academic degrees in their area of expertise. They have extensive experience as teachers and advisors and have had experience working in a variety of career fields.

Students can study in the following academic areas: Child Development/Family Relations, Community Services, Consumer Affairs, Dietetics, Family and Consumer Sciences Education, Fashion Merchandising, Food and Nutrition Science, Food Service Management, Health and Physical Education, Hotel Management, Industrial and Labor Relations (graduate program only), Interior Design/Housing, Medical Technology, Nuclear Medicine Technology, Nursing, Physical Education and Sport Science, Respiratory Care, and Safety Sciences.

College goals are designed to emphasize the areas of human development and family relations; positive health in growth and development through nutritional, physical, and emotional fitness; prevention of illness; restoration of optimal health after illness; occupational safety and health; teacher education; consumerism; commercial and residential design; merchandising and buying of apparel and home furnishings; management within the hospitality industry; and labor relations in the public sector.

Courses in natural sciences are required of all undergraduate academic majors, and students are encouraged to become involved in research activities and computer utilization.

The college offers a variety of opportunities to extend the students' educational experience through honorary and service organizations; field organizations; and sports and recreational activities. Employment opportunities for graduates of the college are excellent.

## College Majors

Child Development/Family Relations
Consumer Affairs
Consumer Services/Community Services Track
Dietetics
Family and Consumer Sciences Education
Fashion Merchandising
Food and Nutrition Science
Health and Physical Education
Hotel, Restaurant, and Institutional Management
Industrial and Labor Relations (graduate program only)
Interior Design/Housing
Medical Technology
Nuclear Medicine Technology
Nursing
Physical Education and Sport
Respiratory Care
Safety Sciences

## Department of Food and Nutrition

**Joanne B. Steiner, Chairperson; Barker, Cessna, Dahlheimer, Johnson; and professor emerita Minnick**

The Food and Nutrition Department offers degree programs in dietetics and food and nutrition science. These curricula prepare students as professionals for a diversity of career opportunities in health care, food service, the food industry, and food and nutrition research.

In addition, the department provides Liberal Studies courses which are available to all university students. These include FN143, an option in the university's Liberal Studies requirements for Health and Wellness; FN145, a Liberal Studies elective; and LS499: Human Food Consumption Patterns, a synthesis course.

### Dietetics

The dietetics program meets the didactic academic requirements approved by the American Dietetic Association. This program will prepare an individual to serve as translator of food and nutrition science information for members of the larger community with respect to healthful food preparation, healthy eating behaviors, medical nutrition therapy, management of nutrition delivery and food service systems, and advocacy for the profession of dietetics. The individual who completes this program will exhibit in-depth knowledge of food, nutrition, behavioral sciences, and management theory. The student will also have the ability to apply these theories at an intermediate level and will develop the ability to problem solve at an entry level using synthetic thinking.

### Food and Nutrition Science

Food and Nutrition Science provides a student with a background in the basic sciences that gives a solid foundation for theoretical and applied food science and nutrition. Emphasis is placed on laboratory work in nutrition and food composition. The program meets the needs of students motivated in the biological-physical sciences who wish, with graduate education, to enter careers in food/nutrition research, nutrition service professions, medical science, and education.

### Nutrition Minor

This minor sequence is recommended for students majoring in the related health disciplines such as child development, family and consumer sciences education, nursing and allied health, food service management, and health and physical education. Students electing a minor in nutrition must complete 15 credit hours of coursework from the courses listed below. Students must note that the completion of this minor neither meets the requirements for practice as a credentialed nutritionist nor satisfies the academic requirements of the American Dietetic Association for a registered dietitian. For additional information about these careers, contact the Food and Nutrition Department.

### Bachelor of Science—Dietetics

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: — 54-55
**Mathematics:** MA217
**Natural Science:** CH101-102
**Social Science:** EC101, PC101, SO151
**Liberal Studies electives:** BE/CO/IM101; HE218 or PC310, no courses with FN prefix

**Major:** — 39
**Required courses:**

| | | |
|---|---|---|
| FN110 | Careers in Food and Nutrition | 1sh |
| FN150 | Foods | 3sh |
| FN151 | Foods Laboratory | 1sh |
| FN212 | Nutrition | 3sh |
| FN213 | Life Cycle Nutrition | 3sh |
| FN355 | Nutrition in Disease I | 3sh |
| FN362 | Experimental Foods | 3sh |
| FN364 | Methods of Teaching | 3sh |
| FN402 | Community Nutrition | 3sh |
| FN430 | Professional Topics in Food and Nutrition | 3sh |
| FN455 | Nutrition in Disease II | 3sh |
| FN458 | Advanced Human Nutrition | 3sh |
| FN463 | Nutrition Counseling | 3sh |
| FN470 | Human Food Consumption Patterns | 3sh |
| FN484 | Senior Seminar | 1sh |

**Other Requirements:**
**Food Service Requirements:** — 13

| | | |
|---|---|---|
| HR259 | Hospitality Purchasing | 3sh |
| HR313 | Food Systems I | 4sh |
| HR356 | Human Resources in the Hospitality Industry | 3sh |
| HR408 | Institutions Management | 3sh |

**Additional Sciences:** — 13

| | | |
|---|---|---|
| BI105 | Cell Biology | 3sh |
| BI155 | Human Physiology and Anatomy | 4sh |
| BI232 | Fundamentals of Microbiology | 3sh |
| CH255 | Biochemistry and Nutrition | 3sh |

**Free Electives (minimum):** — 4-5

**Total Degree Requirements** — 124

### Bachelor of Science—Food and Nutrition Science

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: — 55-56
**Mathematics:** MA121
**Natural Science:** CH111-112
**Social Science:** EC101, PC101, SO151
**Liberal Studies electives:** MA217, no courses with FN prefix

**College:** — 6
**Human Ecology requirements:**

| | |
|---|---|
| One course from list: HE218 or HE224 | 3sh |
| One course from list: CS213, CS315, or CS101 | 3sh |

**Major:** — 32
**Required courses:**

| | | |
|---|---|---|
| FN150 | Foods | 3sh |
| FN151 | Foods Laboratory | 1sh |
| FN212 | Nutrition | 3sh |
| FN212 | Nutrition | 3sh |
| FN362 | Experimental Foods | 3sh |
| FN458 | Advanced Human Nutrition | 3sh |
| FN462 | Advanced Experimental Foods | 3sh |
| FN464 | Food and Nutrition Research Methods | 3sh |
| FN470 | Human Food Consumption Patterns | 3sh |
| FN484 | Senior Seminar | 1sh |

**Controlled electives:**

| | |
|---|---|
| Three courses from list: FN213, 355 (1), 444, 447, 455 (1), 482 | 9sh |

**Other Requirements:** — 22
**Science sequence:**

| | | |
|---|---|---|
| BI150 | Human Anatomy | 3sh (2) |
| BI151 | Human Physiology | 4sh (2) |
| BI232 | Fundamentals of Microbiology | 3sh (2) |
| CH231 | Organic Chemistry I | 4sh |
| CH351 | Biochemistry | 4sh |
| PY111 | Physics I Lecture | 3sh |
| PY121 | Physics I Lab | 1sh |

**Free Electives: (3)** — 8-9

**Total Degree Requirements:** — 124

(1) FN355 and FN455 must be completed as a sequence, if elected.
(2) Alternate Biology sequence recommended for graduate study preparation: BI105, 151, 361.
(3) To meet American Dietetic Association requirements: FN110, FN213, FN355, FN364, FN402, FN430, FN455, FN463, HR259, HR313, HR356, HR358, HR408 (38sh total).

**Nutrition Minor** 15

| | | |
|---|---|---|
| FN212 | Nutrition | 3sh |
| FN213 | Life Cycle Nutrition | 3sh |
| FN245 | Sports Nutrition | 3sh (1) |
| FN355 | Nutrition in Disease I | 3sh |
| FN470 | Human Food Consumption Patterns *or* | 3sh |
| FN402 | Community Nutrition | |

1. Students not interested in FN245 could select both FN402 and FN470 in place of FN245.

## Department of Health and Physical Education

**James G. Mill, Chairperson; Black, Blacksmith, Blair, Celtnieks, Clark, Cortazzo, Dicicco, Grove, Hornfeck, Klingaman, Liscinsky, Montgomery, Moore, Paternostro-Bayles, Sloniger, Sutton, Trenney; and professors emeriti Aierstock, Beck, Dakak, Davis, Dickie, Godlasky, Neal, Sledzik, Tucker**

The Department of Health and Physical Education provides the following services:

1. instruction in health and wellness courses as part of the university's Liberal Studies requirement
2. instruction in health and physical education courses as Physical Education course electives
3. an undergraduate major in health and physical education that leads to the Bachelor of Science degree in Education with potential certification to teach in the Commonwealth of Pennsylvania
4. Bachelor of Science degree in Physical Education and Sport
5. endorsement program in Driver Education—Safe Living

### Required Program—Liberal Studies

The Department of Health and Physical Education through its Health and Wellness course in the Liberal Studies program seeks to enhance the overall well-being of students through instruction planned to promote and maintain desirable levels of physical, mental, emotional, and social well-being. Self-responsibility in the following dimensions of wellness is emphasized: nutritional awareness, stress awareness and management, exercise and fitness, substance use and abuse, and sexually transmitted diseases/AIDS. The importance of reducing risk factors for chronic degenerative disease and managing lifestyle factors for promotion of health is presented with implication for both the present and future. Information is provided during class lectures and enhanced by a variety of practical learning experiences which give students opportunities for self-assessment and personal application of the subject matter.

In addition, the department offers a variety of one-credit activity courses focusing on physical fitness and the development of skills essential for recreation and lifetime sports. Instruction is offered in many activities including aerobic dance, archery, badminton, bowling, fencing, golf, resistive exercise, scuba, swimming, tennis, volleyball, and others.

The university's Liberal Studies requirements, in effect since fall, 1989, require that each student successfully complete HP143 or its alternate, FN143. Students may also elect to take 4 semester hours of the ROTC program (MS101-102) as an alternate to the wellness courses. Activity courses will continue to be offered, although they are no longer required. It is encouraged and recommended that students choose these courses as elective credits.

### Bachelor of Science Degree (Physical Education and Sport)

The Bachelor of Science Degree in Physical Education and Sport provides greater emphasis on subject matter/content and less on pedagogy. Students who select this emphasis area generally apply their knowledge in fields of exercise science, community and corporate fitness, cardiac rehabilitation, pre-physical therapy, and/or executive fitness programming. Requirements for the degree in Physical Education and Sport include: 1) the university's Liberal Studies requirements: 2) 31 credit hours in the HPE Core: and 3) nineteen credits from the Physical Education and Sport requirements.

In addition, the Department of Health and Physical Education has developed two programs approved by the National YMCA Physical Education Office to provide for the professional preparation of YMCA aquatic directors and physical directors. Both programs emphasize high standards and are vitally concerned with the major objectives of YMCA physical education. Specialized "Y" courses are offered through the IUP Aquatic School, through the annual Middle Atlantic Region Aquatic Institute held at IUP each spring, and through other special YMCA programs conducted on the IUP campus and sponsored in cooperation with the Middle Atlantic Region Physical Education Program.

### Bachelor of Science in Education (Health and Physical Education)

Requirements for the degree of Bachelor of Science in Education with a major in Health and Physical Education include the university's Liberal Studies requirements, Professional Education requirements, and the Health and Physical Education core requirement. Upon completion of the degree program and successfully passing the National Teachers Exam, the student is qualified for an Instructional I Certificate in Health and Physical Education, issued by the Pennsylvania Department of Education in Harrisburg. This certificate is valid for teaching health and physical education in grades K through 12 for three years in the public schools of Pennsylvania. All students seeking Pennsylvania certification must follow the four-step process described in the section "Admission to Teacher Education and Certification" found in the Academic Policies section of the catalog.

### Health and Physical Education Core

The Health and Physical Education curriculum identifies a required core of studies which emphasizes a body of knowledge relevant to the study of professional health and physical education, as well as the study of physical education and sport. Courses contained in the core are those which are intended to teach students to identify and solve problems by applying relevant knowledge and also to engage in self-directed learning.

Candidates for the degree program in Health and Physical Education must demonstrate acceptable cognitive and psychomotor qualifications as well as desirable character and personality traits. The professional program seeks to foster those qualities of individual character and competence that are inherent in personal and professional maturity. These competencies are evaluated at the end of the sophomore year. The student is either granted Advanced Standing in the department or restricted in scheduling advanced courses for not less than one probationary semester. Continuation in the major program is based upon attainment of department Advanced Standing.

### Driver Education—Safe Living 7-12

Candidates for the driver education certification must possess, or be a candidate for, a valid Pennsylvania certificate in any area of certification. A student must currently complete the following four courses HP251, 252, 353, and 354. Students must request the certificate in driver education-safe living 7-12 when they apply for graduation. For students who have already graduated, contact the Office of the Dean, College of Education, for correct procedure.

### Aquatics School Course Offerings

Each summer the department offers the annual Aquatics School for eight consecutive days. Students must be seventeen years of age or older and possess the necessary aquatic prerequisites. A fee will be charged which will include room, three meals a day, use of equipment, accident insurance, transportation to and from the lake, and special one-night programs. Certification will be granted by the American Red Cross, National YMCA, Professional Association of Diving Instructors, and the American Heart Association upon completion of courses. All courses may be taken for college credit, if the student is eligible and pays the additional tuition fee. For more information, contact the aquatic director. Courses offered exclusively as a part of the Aquatics School are HP267, 268, 269, 270, 271, 272, 273, 274, 276, 277, 279, and 280. Courses offered during the academic year as well as in summer school include HP242, 261, 265, and 266.

## Bachelor of Science—Physical Education and Sport

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54
**Mathematics:** MA101 or MA110 or MA217
**Health and Wellness:** FN143 or MS101-102
**Natural Science:** BI103-104 or CH101-102
**Social Science:** PC101, SO151
**Liberal Studies Electives:** FN145, CO/BE/IM101, no courses with HP prefix

**Major:**

**Core requirements:** 31

| | | |
|---|---|---|
| HP142 | Foundations of Health, Physical Education, and Sport | 3sh |
| HP200 | Fundamentals of Physical Activity | 1sh |
| HP210 | Motor Development | 2sh |
| HP221 | Human Structure and Function | 3sh |
| HP246 | Biomechanics | 3sh |
| HP251 | Foundations of Safety and Emergency Health Care | 3sh |
| HP263 | Aquatics | 1sh |
| HP341 | Evaluation in Health and Physical Education | 3sh |
| HP343 | Physiology of Exercise | 3sh |
| HP344 | Adapted Physical Education | 3sh |
| HP441 | Psychosocial Implications for Health and Physical Education | 3sh |
| HP442 | Seminar in Health, Physical Education, and Recreation I | 3sh |

**Professional requirements:** 17

| | | |
|---|---|---|
| HP319 | Preprofessional Experience II | 1sh |
| HP345 | Athletic Training I | 3sh |
| HP346 | Athletic Training Lab | 1sh |
| HP375 | Physiological Basis of Strength Training | 3sh |
| HP410 | Exercise Prescription | 3sh |
| HP411 | Physical Fitness Appraisal | 3sh |
| HP412 | Physical Activity and Stress Management | 3sh |

**Controlled electives: (1)** 6-12
BI 151, BI155, HP408, HP413, HP426, HP482, HP493

**Other Requirements:** 0

**Free Electives:** 10-16

**Total Degree Requirements:** 124

(1) Nutrition minor may substitute for Controlled Electives; see Department of Food and Nutrition.

## Bachelor of Science in Education—Health and Physical Education (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54
**Mathematics:** MA101 or MA110 or MA217
**Health and Wellness:** FN143 or MS101-102
**Natural Science:** BI103-104 or CH101-102
**Social Science:** PC101, SO151
**Liberal Studies electives:** FN145, PC378, or approved alternatives

**Major:**

**Course requirements:** 31

| | | |
|---|---|---|
| HP142 | Foundations of Health, Physical Education, and Sport | 3sh |
| HP200 | Fundamentals of Physical Activity | 1sh |
| HP210 | Motor Development | 2sh |
| HP221 | Human Structure and Function | 3sh |
| HP246 | Biomechanics | 3sh |
| HP251 | Foundations of Safety and Emergency Health Care | 3sh |
| HP263 | Aquatics | 1sh |
| HP341 | Evaluation in Health and Physical Education | 3sh |
| HP343 | Physiology of Exercise | 3sh |
| HP344 | Adapted Physical Education | 3sh |
| HP441 | Psychosocial Implications for Health and Physical Education | 3sh |
| HP442 | Seminar in Health, Physical Education, and Recreation I | 3sh |

**Professional requirements**

**Health and Physical Education:** 22

| | | |
|---|---|---|
| HP211 | Dance, Rhythmic Activities, and Gymnastics | 3sh |
| HP212 | Team Sports | 3sh |
| HP213 | Individual and Dual Sports and Adventure Activities | 3sh |
| HP318 | Preprofessional Experience I | 1sh |
| HP321 | Methods for Elementary Health and Physical Education | 3sh |
| HP325 | School and Community Health | 3sh |
| HP426 | Health Science Instruction | 3sh |
| HP450 | Curriculum and Programming in Human Sexuality Education | 3sh |

**Professional Education requirements: (1)** 24

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED421 | Student Teaching | 6sh |
| ED441 | Student Teaching | 6sh |
| ED442 | School Law | 1sh |
| EP202 | Educational Psychology | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Other Requirements:** 0

**Free Electives:** 0

**(#)Total Degree Requirements:** 131

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

## Certification—Driver Education-Safe Living

Certification in Driver Education-Safe Living may be added to a valid Pennsylvania Instructional Certificate with the completion of the following courses:

| | | |
|---|---|---|
| HP251 | Foundations of Safety and Emergency Health Care | 3sh |
| HP252 | Introduction to the Driving Task | 3sh |
| HP353 | Driving Education Program Management | 3sh |
| HP354 | Application of Driver Education Instructional Modes | 3sh |

## Department of Hotel, Restaurant, and Institutional Management

**Jeffrey A. Miller, Chairperson; Baker, Cauffiel, Marshall, Shiring, Van Dyke; and professors emeriti Simkins, Woods**

The department offers students an academic preparation leading to a Bachelor of Science degree in Hotel, Restaurant, and Institutional Management. Students take general courses in business, chemistry, biology, computer literacy, and foreign language. Students elect to concentrate in either food service management or lodging management. The program has received accreditation from the Accreditation Commission for Programs in Hospitality Administration.

The food service management track prepares men and women for management positions in restaurants, corporate food services, entertainment or recreation food service, health care, or other institutional and contract food service.

The lodging management track prepares women and men for management positions within hotels, resorts, and other lodging operations. Emphasis is on the study of housekeeping, rooms, and sales departments but also includes food production and service.

Both programs require the student to complete 880 hours of hospitality industry work experience before graduation. The first 440 hours are completed during the freshman and sophomore years in any type of hospitality position selected by the student and must be completed before the internship is scheduled. The second 440 hours are completed as an internship. The internship is supervised by a faculty member who assists the student in developing the learning package to be achieved during the internship and who advises the intern on university, department, and site requirements.

Professional-type uniforms are prescribed as part of the dress code for departmental majors in all food production courses.

### Bachelor of Science—Hotel, Restaurant, and Institutional Management

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: — 54-55
**Mathematics:** MA217
**Natural Science:** CH101-102
**Social Science:** EC121, PC101
**Liberal Studies electives:** CO/IM/BE101, FN145, no course with HR prefix

**Major:**
**Required courses:** — 33

| | | |
|---|---|---|
| HR101 | Introduction to Hospitality Management | 3sh |
| FN150 | Foods | 3sh |
| FN151 | Foods Laboratory | 1sh |
| HR259 | Hospitality Purchasing | 3sh |
| HR313 | Food Systems I | 4sh |
| HR356 | Human Resources in the Hospitality Industry | 3sh |
| HR401 | Cost Management | 3sh |
| HR411 | Seminar in Hospitality Management | 3sh |
| HR413 | Food Systems II | 4sh |
| HR493 | Internship in Hospitality Management | 6sh (1) |

**Controlled electives: One track required** — 12-15
**Food Service Management Track:** FN145, HR306, HR358, HR406, HR408
**Lodging Management Track:** HR115, HR360, HR365, HR420, IM300

**Other Requirements:** — 15-21

| | | |
|---|---|---|
| AG201 | Accounting Principles I | 3sh |
| BI232 | Fundamentals of Microbiology | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| MK320 | Principles of Marketing | 3sh |
| FL--- | Foreign Languages | 3-9sh (3) |

**Free Electives:** — 0-11

**Total Degree Requirements:** — 124

(1) Each student must complete 880 hours of work experience, of which 440 hours must be through supervised experiences in HR493. See department internship coordinator for detailed information.
(2) Credit counted in Liberal Studies electives.
(3) Each student must have foreign language proficiency of either:
   a. Intermediate-level - SP201/FR202/GM252 or
   b. Successful completion of two semesters of one language. Intermediate-level courses may be used as Liberal Studies elective.

## Department of Human Development and Environmental Studies

**Donna L. Streifthau, Chairperson; Austin, Bell, Gordon, Heckroth, Kesner, Lynn, A. Nelson, L. Nelson, Rodgers, Schmitt, Swinker, Viggiano; and professors emeritae Cramer, Gallati, Hovis, Kazmer, Wood**

The Department of Human Development and Environmental Studies was created by the merging of the Family and Consumer Sciences Education and Consumer Services departments. The mission statement of the Department of Human Development and Environmental Studies is to empower individuals to support human and environmental needs, enabling them to perform professionally in a changing, diverse technological and global society.

The department is composed of majors that are interdisciplinary and share humanistic values. All majors have an applied research focus and stress critical thinking, professional judgment, decision making, and synthesis of information with direct focus upon career paths.

The Human Development and Environmental Studies Department offers academic programs leading to the Bachelor of Science degree in the following majors: Child Development/Family Relations, Consumer Affairs, Fashion Merchandising, and Interior Design/Housing. The Family and Consumer Sciences Education program leads to a Bachelor of Science in Education. These majors prepare men and women for positions in business, the community, and education. The majors also prepare students for graduate study in the areas of interior design, housing, clothing, textiles, consumer economics, community service, child development, family studies, or education.

Faculty advisors work closely with students in planning and integrating the academic program to meet the students' career goals and to supplement classroom experiences. Internships are available and encouraged so students can apply academic knowledge to actual situations. International study is also available to provide an enriching cultural experience.

### Consumer Affairs

The Consumer Affairs major prepares individuals for professional positions in government, business, and the community. This option concentrates on consumer economic behavior and consumer protection and their relationship to the fair exchange and consumption of products and services. The increased interest in consumer concerns has resulted in creating and expanding positions for persons with an understanding of consumer needs, business operations, and regulatory agencies. The interdisciplinary approach provides the necessary knowledge and skills to fulfill the requirements of such positions.

### Community Services Track

Within the Consumer Affairs major, students can elect a community services track which offers a broad selection of courses. Electives may be concentrated in specific areas. A concentration of courses is elected in an outside field of study such as sociology or psychology. Graduates may be employed by the Extension Services or by governmental and social agencies.

### Fashion Merchandising

The Fashion Merchandising program provides course emphasis in clothing and human behavior, apparel production and analysis, textiles and quality control, apparel distribution, merchandising and promotion, global diversity, historic textiles and apparel, color and aesthetics, and apparel construction. Communications, problem solving, group project organization, professional presentation, and analytical and critical thinking skills are incorporated in course content. The Eberly College of Business complements the Fashion Merchandising major by providing study in one of three options: Business Administration, Marketing, and Small Business Management.

A cooperative program between IUP and the Fashion Institute of Technology in New York City allows students to study one of seven majors: accessories design, advertising and communications, advertising design, fashion design, manufacturing management, textile/surface design, and textile development and marketing.

Graduates of the Fashion Merchandising program are being prepared for entry-level positions such as manufacturer's sales representative, production assistant, ready-to-wear quality control analyst, textile testing laboratory technician, management trainee leading to position of store manager, executive/merchandising trainee leading toward position of buyer/merchandise manager, museum curator assistant, personal color consultant, and personalized shopping specialist for an up-scale retail firm.

### Interior Design/Housing

The Interior Design program develops creative individuals who are able to conceive, propose, and implement design solutions supportive of the needs of people and the environment. Emphasis is placed on research, synthesis of information, and creative problem solving. Space planning, design graphics, lighting, color theory, historical and modern interiors, housing, and textiles from the core of the program. Students develop an understanding of the Americans with Disabilities Act (ADA) and its relationship to barrier-free design and a sensitivity to global environmental issues. Students tour a variety of settings including offices, museums, factories, showrooms, retail outlets, construction sites, and other design-related facilities. Supportive courses are available in art and business. Potential careers include commercial and residential design, housing, sales, historical preservation, and showroom management.

## Bachelor of Science—Consumer Affairs

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54-55
**Mathematics:** MA101 or higher
**Natural Science:** CH101-102
**Social Science:** EC101, PC101, SO151
**Liberal Studies electives:** no courses with CS prefix

**Major:** 42
**Required courses:**

| | | |
|---|---|---|
| CS101 | Personal and Family Management | 3sh |
| CS121 | Introduction to Consumer Services | 1sh |
| CS213 | Residential Appliances and Consumer Electronics | 3sh |
| CS312 | Housing and Culture | 3sh |
| CS315 | Consumer Economics and Family Finance | 3sh |
| CS413 | Problems in Consumer Economics | 3sh |
| CS416 | Problems in Family Finance | 3sh |
| CS421 | Senior Seminar | 2sh |
| FM110 | Introduction to Fashion | 3sh |
| FM303 | Visual Merchandising | 3sh |
| FM314 | Textiles | 3sh |
| FN212 | Nutrition | 3sh |
| JN120 | Journalistic Writing | 3sh |

**Controlled electives:**
Three credit courses from list:
CS217, CS433, CS461, CS482, FM112, FM212, FM303, FM350, FM450, HR259, FN362, HR313, HR358 6sh (1)

**Other Requirements:** 18
**Outside concentration:**
**Required:**

| | | |
|---|---|---|
| BL235 | Introduction to Business Law | 3sh |
| BL336 | Law of Business Organizations | 3sh |
| BL337 | Consumer Law | 3sh |

**Controlled electives: Three courses from list:**
AD321, MG300, MK320, MK321, MK433 9sh (1)

**Free Electives:** 9-10

**Total Degree Requirements:** 124

(1) Substitutions may be approved by department.

## Bachelor of Science—Consumer Services/Community Services Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54-55
**Mathematics:** MA101 or higher
**Natural Science:** CH101-102
**Social Science:** EC101, PC101, SO151
**Liberal Studies electives:** no course with CS prefix

**Major:** 32
**Required courses:**

| | | |
|---|---|---|
| AR120 | Principles of Design | 2sh |
| CS101 | Personal and Family Management | 3sh |
| CS121 | Introduction to Consumer Services | 1sh |
| CS213 | Residential Appliances and Consumer Electronics | 3sh |
| CS312 | Housing and Culture | 3sh |
| CS315 | Consumer Economics and Family Finance | 3sh |
| CS421 | Senior Seminar | 2sh |
| FM110 | Introduction to Fashion | 3sh |
| FM314 | Textiles | 3sh |
| FN212 | Nutrition | 3sh |
| HE224 | Marriage and Family Relations | 3sh |

**Controlled electives:**
One course from list: FM112 or FM212 3sh

**Other Requirements:** 25
**Human Ecology requirements:**

| | | |
|---|---|---|
| FN150 | Foods | 3sh |
| FN151 | Foods Laboratory | 1sh |
| HE218 | Child Development | 3sh |

**Outside concentration:** 18sh
Six courses from list: AN211, AN319, PC290, PC310, PC311, PC312, PC320, PC321, PC322, PC330, PC361, PC373, PC374, SO231, SO332, SO333, SO336, SO339, SO357, SO435, SW238.

**Free Electives:** 12-13

**Total Degree Requirements:** 124

## Bachelor of Science—Fashion Merchandising

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54-56
**Mathematics:** MA101 or higher level MA course
**Natural Science:** CH101-102
**Social Science:** EC121; GE104 or PC101; AN110 or AN211 or SO151
**Liberal Studies electives:** BE/CO/IM101, EC122; MA214 or MA217; no course with FM prefix

**Major:** 39
**Required courses:**

| | | |
|---|---|---|
| FM110 | Introduction to Fashion | 3sh |
| FM112 | Fundamentals of Clothing Construction | 3sh |
| FM314 | Textiles | 3sh |
| FM350 | Apparel Industry I | 3sh |
| FM385 | Ready-to-Wear Analysis | 3sh |
| FM434 | Quality Control in Textiles /W/ | 3sh |
| FM450 | Apparel Industry II | 3sh |
| FM456 | Historic Costume | 3sh |
| FM480 | Seminar in Fashion Merchandising | 3sh |

**Controlled electives:**
Four courses from list: CS205, FM212, FM252, FM281, FM303, FM357, FM433, FM453, FM454, FM455, FM457, FM481, FM482 12sh

| | | | |
|---|---|---|---|
| **Additional Requirements:** | | | **21-24** |
| **Required courses:** | | | |
| AG201 | Accounting Principles I | 3sh | |
| MK320 | Principles of Marketing | 3sh | |
| JN120 or EN310 | Journalistic Writing or Public Speaking | 3sh | |
| *Students will complete courses in one of the following options:* | | 12-15sh | |

**Option 1:** Business Administration Minor (15sh)
AG202, FI310, MG310, select two from AD321, BL235, IM300
*(Note: students must meet all minor requirements listed in catalog)*

**Option 2:** Marketing (12sh)
MK321, MK420, select two from DE332 (1), DE333, MK421 (1), MK430, MK433

**Option 3:** Small Business Management (12sh)
MG275, MG325 (1), select two from MG300, MG310, MG350, MG403 (2)

| | |
|---|---|
| **Free Electives:** | **5-10** |
| **Total Degree Requirements:** | **124** |

(1) Prerequisites to be waived.
(2) Student will need to take AG202 and AG300.

## Bachelor of Science—Interior Design/Housing

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **54-55**
**Mathematics:** MA101 or higher
**Fine Arts:** AH101
**Natural Science:** CH101-102
**Social Science:** EC101, PC101, SO151
**Liberal Studies electives:** AH205 or 206, no courses with CS prefix

| | | | |
|---|---|---|---|
| **Major:** | | | **41** |
| **Required courses:** | | | |
| CS121 | Introduction to Consumer Services | 1sh | |
| CS213 | Residential Appliances and Consumer Electronics | 3sh | |
| CS217 | Interior Design | 3sh | |
| CS312 | Housing and Culture | 3sh | |
| CS315 | Consumer Economics and Family Finance | 3sh | |
| CS357 | Interior Design Studio | 3sh | |
| CS421 | Senior Seminar | 2sh | |
| CS465 | Interior Lighting | 3sh | |
| FM314 | Textiles | 3sh | |
| **Controlled electives:** | | | |
| One course from AR113 or 120 | | 2-3sh | |
| Five courses from list: CS101, 117, 205, 281, 433, 462, 463, 464, 481, 482, FM303 | | 14-15sh | |
| **Other Requirements:** | | | **18** |
| **Outside concentration:** Six courses from lists | | 18sh | |

**Business:** AD101 or MG300, AD321, BL235, BL336, BL337, BL382, AG201, DE331, DE332, DE333, IM300, MK320, MK433
**Art:** AR100, 111, 112, 211, 213, 214, 215, 216, 217, 218, 219, 421, 451

| | |
|---|---|
| **Free Electives:** | **10-11** |
| **Total Degree Requirements:** | **124** |

## Family and Consumer Sciences Education

The Family and Consumer Sciences Education major prepares students for the teaching of family and consumer sciences-related subjects in the public schools. Coursework is required in all areas of family and consumer services, including child development and family relations, consumer economics, clothing, foods, and interior design/housing. Professional education courses are also required.

## Bachelor of Science in Education—Family and Consumer Sciences Education (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **54-56**
**Natural Science:** CH101-102
**Social Science:** PC101, SO151
**Liberal Studies electives:** CS315, no courses with HE prefix

| | | | |
|---|---|---|---|
| **College:** | | | **33** |
| **Professional Education sequence:** | | | |
| CM301 | Technology for Learning and Instruction | 3sh | |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh | |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh | |
| ED431 | Teaching in Home Economics | 6sh | |
| ED441 | Student Teaching | 6sh | |
| ED442 | School Law | 1sh | |
| EP202 | Educational Psychology | 3sh | |
| EP377 | Educational Tests and Measurements | 3sh | |
| FE202 | American Education in Theory and Practice | 3sh | |
| HE350 | Teaching Family Life Education | 3sh | |
| HE450 | Teaching Vocational Home Economics | 3sh | |
| EX300 | Education of the Exceptional in the Regular Classroom | 0-3sh (1) | |
| **Major:** | | | **35** |
| **Required courses:** | | | |
| CS101 | Personal and Family Management | 3sh | |
| CS312 | Housing and Culture | 3sh | |
| FM112 | Fundamentals of Clothing Construction | 3sh | |
| FM314 | Textiles | 3sh | |
| FN150 | Foods | 3sh | |
| FN151 | Foods Laboratory | 1sh | |
| FN212 | Nutrition | 3sh | |
| HE218 | Child Development | 3sh | |
| HE220 | Teaching in Child Development Centers | 4sh | |
| HE224 | Marriage and Family Relations | 3sh | |
| **Controlled electives:** | | | |
| One from list: CS213 or 413 | | 3sh | |
| One from list: HE424 or 463 | | 3sh | |
| **Free Electives:** | | | **0-2** |
| **(#) Total Degree Requirements:** | | | **124** |

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

## Child Development/Family Relations Major

The Child Development/Family Relations program leads to a Bachelor of Science degree. Primary objectives of the program are to prepare professionals to administer and/or work in programs that entail aspects of child development and family relationships: to teach at the adult level; or administer human services agencies at federal, state, or local level. The program also provides preparation for students who want to pursue graduate study in child development or family studies. Students in Child Development/Family Relations may secure certification in Early Childhood Education through an optional program.

### Bachelor of Science—Child Development/Family Relations

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54-56
**Mathematics:** MA101 or 110 or 121 or 217
**Natural Science:** CH101-102
**Social Science:** AN110, PC101, SO151
**Liberal Studies electives:** no courses with HE prefix

**Major:** 39-40
**Required courses:**

| | | |
|---|---|---|
| CS315 | Consumer Economics and Family Finance | 3sh |
| FN212 | Nutrition | 3sh |
| HE218 | Child Development | 3sh |
| HE220 | Teaching in Child Development Centers\W\ | 4sh |
| HE224 | Marriage and Family Relations | 3sh |
| HE317 | Infant Development | 3sh |
| HE426 | Techniques of Parent Education | 3sh |
| HE463 | Family and the Community | 3sh |

**Controlled electives: (one track)**
**Track A:** Child Development/Family Relations
HE321, 324, 418, 422, 424
**Track B:** Child Development (by permission only)
HE321, 418, 420, 422
**Track C:** Family Relations (by permission only)
HE324 \W\, 424, 493

**Other Requirements:** 10
**Outside courses:**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| BI155 | Human Physiology and Anatomy | 4sh |
| EP202 | Educational Psychology | 3sh |

**Free Electives:** 18-23

**Total Degree Requirements:** 124

## Department of Industrial and Labor Relations

**James F. Byers, Chairperson; Gaylor, McPherson, Morand, Sedwick, and professor emeritus Gates**

The Department of Industrial and Labor Relations offers a graduate program within the College of Health and Human Services leading to the degree of Master of Arts in Industrial and Labor Relations. The 42-semester-hour program consists of a required core of 27 semester hours, including an elective thesis and elective course offerings totaling 15 semester hours. Internships are available and strongly encouraged.

The Industrial and Labor Relations program is multidisciplinary, combining analytical and human relations skills with knowledge drawn from social sciences and business disciplines. The degree is designed to prepare professional industrial and labor relations practitioners in public and private management, unions, neutral agencies, government agencies, and arbitration panels. It has as a special emphasis labor relations in the public sector.

While the department does not offer coursework leading to an undergraduate major or degree, it does offer several undergraduate courses which are open to students of any major or college.

## Department of Nursing and Allied Health Professions

**Jodell L. Kuzneski, Chairperson; Barlow, Beck, Bellak, Cunningham, Edwards, Gerwick, Hartman, Holmes, Labant, Polansky, Poorman, Rossiter, Sadler, Settlemyer, Shellenbarger, Snyder, Szwarc, Twal, Walz, Zuraikat; and professors emeritae Blair, Hart, Kresak, Murray, Thistlethwaite**

The College of Health and Human Services offers a curriculum leading to the Bachelor of Science Degree in Nursing. Students are admitted to the nursing major as freshmen. Upon completion of the program, the graduate is prepared to write the examination for licensure as a Registered Nurse in Pennsylvania and other states. The program is fully accredited by the National League for Nursing.

The nursing curriculum has as its primary goal the development of competent professional nurses who are liberally educated, clinically competent, and aware of their social responsibilities as members of the health professions. The program is designed to provide a broad background in liberal education, coupled with the specialized knowledge and skills required for professional nursing. Additionally, the curriculum prepares the nurse to practice within the professional code of nursing ethics, to function effectively as a member of the health care professions, and to utilize scientific principles in planning and implementing health care. The nursing program emphasizes concepts in health promotion and maintenance and restoration of wellness for people of all ages.

The first three semesters are devoted mainly to Liberal Studies and science courses considered essential to the nursing major. The first clinical nursing courses begin in the fourth semester. Clinical experiences in patient care are provided in acute and long-term care facilities as well as community health agencies throughout the last five semesters. Detailed information is available in the department office regarding health screening requirements, professional uniform requirements, liability insurance needs, and transportation requirements. There is an option to complete the program in five years.

Registered Nurse students are enrolled in the basic baccalaureate program in nursing. They will have an upper-division major in Nursing and will fulfill all degree requirements set by the university and the Nursing Department. The Registered Nurse student may be awarded advanced standing, based on prior work completed at an accredited college or university and on exemption tests in nursing at a given point in the curriculum.

### Bachelor of Science—Nursing

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 55-56
**Mathematics:** MA217 (1)
**Natural Science:** CH101-102
**Social Science:** PC101, SO151
**Liberal Studies electives:** PY151/161, PC310, no courses with NU prefix

**Major:** 53
**Required courses:**

| | | |
|---|---|---|
| NU280 | Introduction to Nursing | 3sh |
| NU285 | Introduction to Clinical | 3sh |
| NU302 | Core I | 2sh |
| NU303 | Clinical Laboratory I | 5sh |
| NU304 | Core II | 2sh |
| NU305 | Clinical Laboratory II | 5sh |
| NU322 | Maintenance and Restoration of Wellness I | 3sh |
| NU323 | Maintenance and Restoration of Wellness II | 3sh |
| NU402 | Core III | 2sh |
| NU403 | Clinical Lab III | 5sh |
| NU404 | Core IV | 2sh |
| NU405 | Clinical Lab IV | 5sh |
| NU422 | Maintenance and Restoration of Wellness III | 3sh |
| NU423 | Maintenance and Restoration of Wellness IV | 3sh |
| NU430 | Nursing Research | 3sh |
| NU480 | Seminar in Nursing (2) | 4sh |

| | | | |
|---|---|---|---|
| **Other Requirements:** | | | **19** |
| **Science sequence:** | | | |
| BI105 | Cell Biology | 3sh | |
| BI150 | Human Anatomy | 3sh | |
| BI151 | Human Physiology | 4sh | |
| BI241 | General Microbiology | 3sh | |
| FN212 | Nutrition | 3sh | |
| PC321 | Abnormal Psychology | 3sh | |
| **Free Electives:** | | | **0** |
| **(#)Total Degree Requirements:** | | | **127-128** |

(1) The Pennsylvania State Board of Nursing requires two units of high school mathematics (one of which is algebra) for admission to the nursing major.
(2) NU480 must be taken four semesters, focusing on a different topic each semester.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

## Allied Health Professions Programs

**Rebecca L. Hartman, Coordinator**

### Respiratory Care

Respiratory therapists assist physicians in the care of patients who have respiratory system problems or illness that relates to breathing. Their assistance includes administering gaseous drugs and executing therapeutic procedures. Included are the operation and maintenance of specialized equipment.

The program leads to the Bachelor of Science Degree in Respiratory Care. Presented jointly by IUP and the School of Respiratory Care, Western Pennsylvania Hospital in Pittsburgh, the program offers intensive theoretical and applied knowledge to produce highly skilled graduates who are prepared to enter the profession as therapists or instructors.

Two academic years of university studies, followed by two academic years of hospital studies and clinical practice, constitute the program. Incoming students must maintain a QPA of 2.25 in Natural Sciences and Mathematics to be considered for admission into the clinical years in Respiratory Care. However, since admission to the hospital is competitive, IUP cannot guarantee admission into the hospital program.

### Bachelor of Science—Respiratory Care (*)

**Liberal Studies:** As follows: **45**
**Composition:** EN101, EN202
**Humanities:** three courses, one in each area (PH222 recommended)
**Fine Arts:** one course
**Mathematics:** MA110 or higher level
**Natural Science:** CH101-102
**Social Sciences:** PC101, SO151, non-Western course
**Health and Wellness/ROTC:** H&W recommended
**Liberal Studies electives:** one course from: CO101, PC378, other course as approved by advisor
**Synthesis:** not required

| | | | |
|---|---|---|---|
| **Major:** | | | **62** |
| **Required courses:** | | | |
| Completed in junior and senior years at Western Pennsylvania Hospital in Pittsburgh | | | |
| RT326 | Respiratory Care Clinical Practice I | 3sh | |
| RT327 | Pharmacology | 3sh | |
| RT328 | Introduction to Respiratory Care | 4sh | |
| RT329 | Respiratory Care Instrumentation | 4sh | |
| RT330 | Cardiopulmonary Resuscitation | 2sh | |
| RT331 | Introduction to Ventilator Management | 1sh | |
| RT333 | Respiratory Care Clinical Practice II | 4sh | |
| RT334 | Respiratory Care Instrumentation and Application | 4sh | |
| RT335 | Nursing Arts | 3sh | |
| RT336 | Cardiopulmonary Evaluation and Clinical Correlation | 4sh | |
| RT337 | Introduction to Pulmonary Function Studies | 1sh | |
| RT426 | Respiratory Care Clinical Practice III | 5sh | |
| RT427 | Applied Pulmonary Physiology | 4sh | |
| RT428 | Essentials of Electrocardiology | 2sh | |
| RT429 | Design and Function of a Respiratory Care Program | 2sh | |
| RT430 | Pulmonary Function Studies | 2sh | |
| RT431 | Pediatric Respiratory Care | 1sh | |
| RT433 | Respiratory Care Clinical Practice IV | 5sh | |
| RT434 | Neonatal Respiratory Care | 3sh | |
| RT436 | Respiratory Care Teaching | 2sh | |
| RT437 | Methods in Critical Care | 2sh | |
| RT438 | Cardiopulmonary Rehabilitation | 1sh | |
| **Other Requirements:** | | | **17** |
| **Science courses:** | | | |
| BI105 | Cell Biology | 3sh | |
| BI150 | Human Anatomy | 3sh | |
| BI151 | Human Physiology | 4sh | |
| BI241 | General Microbiology | 3sh | |
| PY151 | Medical Physics Lecture | 3sh | |
| PY161 | Medical Physics Lab | 1sh | |
| **Free Electives:** | | | **0** |
| **(#)Total Degree Requirements:** | | | **124** |

(*) Curriculum revision is pending approval.
(#) See advisory paragraph *"Timely Completion of Degree Requirements"* in catalog section on Requirements for Graduation.

### Medical Technology

Medical Technology encompasses the study of analytical and diagnostic procedures used in clinical laboratories and in medical research. Medical technologists perform a variety of laboratory tests upon which the physician depends for accurate diagnosis, prognosis, and proper treatment of the patient. The program of studies, presented jointly by IUP and accredited medical technology programs in hospitals, prepares the student to enter the profession. Upon completion of the four-year program, the degree of Bachelor of Science in Medical Technology is granted. The program also prepares the student for graduate and professional schools.

IUP maintains short- and long-term affiliations with selected hospital schools. The Allied Health Professions coordinator provides student counseling and maintains a liaison with hospital schools. However, since admission to any hospital program is on a competitive basis, IUP cannot guarantee admission into any hospital program.

The following programs maintain permanent agreements of affiliations with IUP: Abington Memorial Hospital, Abington; Allegheny University Hospitals, Elkins Park; Altoona Hospital, Altoona; Conemaugh Memorial Medical Center, Johnstown; Lancaster General Hospital, Lancaster; Latrobe Area Hospital, Latrobe; Polyclinic Medical Center, Harrisburg; and St. Vincent Health Center, Erie. Other temporary affiliations are negotiated for the convenience of the student.

Completion of academic studies at IUP and of one year of clinical experience qualifies the student to take a national certification examination. Successful results on this examination lead to certification as a professionally qualified medical technologist.

### Bachelor of Science—Medical Technology

**Liberal Studies:** As follows **45-47**
**Composition:** EN101, EN202
**Humanities:** three courses—one in each area (PH222 recommended)
**Fine Arts:** one course
**Mathematics:** MA110 or higher level
**Natural Science:** CH111-112
**Social Sciences:** three courses
**Health and Wellness/ROTC:** H&W recommended
**Liberal Studies electives:** PY111
**Synthesis:** not required
**Writing Intensive:** one required

| | | | |
|---|---|---|---|
| **Major:** | | | 32 |
| **Required courses: (1)** | | | |
| MT494 | Clinical Microbiology | 8sh | |
| MT495 | Clinical Chemistry | 10sh | |
| MT496 | Clinical Hematology/Coagulation | 6sh | |
| MT497 | Clinical Immunohematology | 4sh | |
| MT498 | Clinical Immunology/Serology | 2sh | |
| MT499 | Clinical Seminar | 2sh | |
| **Other Requirements: Science sequence** | | | 37-39 |
| **Required courses:** | | | |
| BI111 | Principles of Biology I | 4sh | |
| BI250 | Principles of Microbiology | 3sh | |
| BI364 | Immunology | 3sh | |
| CH231 | Organic Chemistry I | 4sh | |
| CH232 | Organic Chemistry II | 4sh | |
| CH323 | Analytical Methods | 4sh | |
| CH351 | Biochemistry | 4sh | |
| PY121 | Physics I Lab | 1sh | |
| PY112/122 | Physics II Lecture/Lab | 4sh | |
| **Controlled electives:** | | | |
| Two courses from list: | | | |
| BI112, 120, 151, 263, 331, 350, 352, 360, 432, 466, 476 | | 6sh | |
| **Free Electives:** | | | 6-10 |
| **(#)Total Degree Requirements:** | | | 124 |

(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

(1) These courses are offered by our affiliating hospital-based clinical programs. These areas of study are consistent with requirements of the National Accrediting Agency for Clinical Laboratory Sciences. All six of these areas of study are completed during the final twelve months of the degree program at one of the affiliating hospitals.

## Nuclear Medicine Technology

Nuclear Medicine is the medical specialty that utilizes the nuclear properties of radioactive and stable nuclides to make diagnostic evaluations of the anatomic or physiologic conditions of the body and to provide therapy with unsealed radioactive sources. A nuclear medicine technologist's skills complement those of the nuclear medicine physician and other allied health professionals.

The nuclear medicine technologist is a highly trained individual who has completed an approved course of study in the theory of nuclear medicine technology. This allied health profession utilizes radioactive materials for the diagnosis of various pathological disease states and for the treatment of some specific disorders. The American College of Radiology, American Medical Association, American College of Medical Technology, American Society of Technologists, Society of Nuclear Medicine, and the Society of Medicine-Technologist Section cooperate to establish, maintain, and promote appropriate standards of quality for educational programs in nuclear medicine technology.

The program leading to a Bachelor of Science degree in Nuclear Medicine Technology consists of three years of study at IUP and one year at the University of Findlay/Nuclear Medicine Institute in Findlay, Ohio. Incoming students must maintain a QPA of 2.25 in the Natural Science and Mathematics to be considered for admission to the Nuclear Medicine Institute. Since admission to the Nuclear Medicine Institute is competitive IUP cannot guarantee admission into their program.

## Bachelor of Science—Nuclear Medicine Technology

| | | | |
|---|---|---|---|
| **Liberal Studies:** As follows: | | | 54 |
| **Composition:** EN101, EN202 | | | |
| **Humanities:** three course, one in each area | | | |
| **Fine Arts:** one course | | | |
| **Mathematics:** MA110 or higher level | | | |
| **Natural Science:** CH101-102 | | | |
| **Social Science:** PC101, SO151, non-western and social science (AN110 recommended) | | | |
| **Health and Wellness/ROTC:** HP143, FN143, or MS101-102 | | | |
| **Liberal Studies Electives/Synthesis:** four Liberal Studies electives or three Liberal Studies electives and one Synthesis course | | | |
| **Major:** | | | 32 |
| **Required courses: (1)** | | | |
| NT427 | Nuclear Scintigraphy | 3sh | |
| NT428 | Radiation Physics | 3sh | |
| NT429 | Nuclear Medicine Instrumentation | 3sh | |
| NT430 | Radiation Biology and Radiation Protection | 2sh | |
| NT431 | In Vivo/In Vitro Non-Imaging | 1sh | |
| NT432 | Radiopharmaceuticals | 3sh | |
| NT433 | Introduction to Tomographic Imaging | 1sh | |
| NT434 | Clinical Nuclear Medicine | 16sh | |
| **Other Requirements:** | | | 18 |
| **Science courses:** | | | |
| BI150 | Human Anatomy | 3sh | |
| BI151 | Human Physiology | 4sh | |
| PY111 | Physics I Lecture | 3sh | |
| PY121 | Physics I Lab | 1sh | |
| PY112 | Physics II Lecture | 3sh | |
| PY122 | Physics II Lab | 1sh | |
| **Required course:** | | | |
| EN310 | Public Speaking | 3sh | |
| **Free Electives:** | | | 17-20 |
| At least two of the selected courses must be Writing Intensive. | | | |
| **Total Degree Requirements:** | | | 124 |

(1) These courses are offered at the University of Findlay/Nuclear Medicine Institute, Findlay, Ohio. These areas of study are consistent with requirements of the Committee for Allied Health Education Accreditation. All eight of these areas of study are completed during the final twelve months of the degree program.

## Gerontology Certificate Program

The Gerontology Certificate program provides an interdisciplinary approach to the systematic study of the aging and is designed to be combined with any undergraduate major at IUP. The 21-credit-hour program entails three core courses, three elective courses, and an internship that will provide experiential learning in an agency or program serving older adults. Many courses fulfill the requirements for the Liberal Studies program. Applications are available at 244 Johnson Hall. For information call 412-357-7647.

## Gerontology Certificate Program

| | | | |
|---|---|---|---|
| **Core Courses:** | | | 9 |
| HP350 | Health Aspects of Aging | 3sh | |
| PC312 | Adult Development and Aging | 3sh | |
| SO357 | Sociology of Aging | 3sh | |
| **Controlled Electives:** | | | 9 |
| AN340, AN444, CS315, GN281, GN481, GN482, HE321, HP413, MG300, MG311, PC376, PC378, PH1400, PH1405, RH312, SA380, SO336, SO342, SO345 | | | |
| **Other Requirements:** | | | 3 |
| Internship (GN493 or internship in student's major) | | 3sh | |
| **Total Requirements:** | | | 21 |

## Department of Safety Sciences

**Robert D. Soule, Chairperson; Chekanski, Christensen, Engler, Ferguson, Joseph, McClay, McClosky, Reed**

The department offers the Bachelor of Science degree in Safety Sciences with specialization in occupational safety and health. The program in Safety Sciences prepares the student for professional, administrative, managerial, and supervisory positions in industry, manufacturing, insurance, transportation, utility, government, construction, trade service industries, and others. There remains a need in Pennsylvania and the nation for university-educated occupational safety and health professionals. The curriculum includes a major of 41 semester hours in Safety Sciences and an additional 15 semester hours in related professional courses. A variety of elective courses is available in both the major and professional fields that enable students to strengthen their primary interest areas.

### Bachelor of Science—Safety Sciences (@)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **55-56**
**Mathematics:** MA123
**Natural Science:** CH101 and 102
**Social Science:** PC101, SO151, non-western culture recommended
**Liberal Studies electives:** EC122, MA217, and BE/CO/IM101, no course with SA prefix

**Major:** **41**

**Required courses:**

| | | |
|---|---|---|
| SA101 | Introduction to Occupational Safety and Health | 3sh |
| SA111 | Principles of Industrial Safety I | 3sh |
| SA210 | Environmental Safety and Health Regulations | 3sh |
| SA211 | Principles of Industrial Safety II | 4sh |
| SA301 | Health Hazard Identification | 3sh |
| SA303 | Control of Health Hazards | 3sh |
| SA311 | Industrial Fire Protection | 3sh |
| SA345 | Systems Safety Analysis | 3sh |
| SA347 | Ergonomics | 3sh |
| SA402 | Health Hazard Evaluation | 3sh |
| SA412 | Evaluation of Safety Program Effectiveness | 4sh |
| SA488/493 | Safety Internship | 6sh |

**Other Requirements:** **27**

**Additional Science and Mathematics:**

| | | |
|---|---|---|
| BI155 | Human Physiology and Anatomy | 4sh |
| PY111 | Physics I Lecture | 3sh |
| PY112 | Physics II Lecture | 3sh |
| PY121 | Physics I Lab | 1sh |
| PY122 | Physics II Lab | 1sh |

**Professional courses:**

| | | |
|---|---|---|
| AD321 | Business and Interpersonal Communications | 3sh |
| MG311 | Human Behavior in Organizations | 3sh |
| Three professional courses approved by student's advisor | | 9sh |

**Free Electives:** **3**

**Total Degree Requirements:** **126-127**

(@) To be implemented 1997-98, pending Council of Trustees approval.

### Minor—Safety Sciences **18**

**Required courses:**

| | | |
|---|---|---|
| SA101 | Introduction to Occupational Safety and Health | 3sh |
| SA111 | Principles of Industrial Safety I | 3sh |
| SA301 | Health Hazard Identification | 3sh |

**Controlled electives:**

| | |
|---|---|
| Three SA courses approved by department chairperson | 9sh |

# The College of Humanities and Social Sciences

**Brenda L. Carter**, Dean
**Vacant**, Associate Dean
**Alphonse N. Novels**, Associate Dean

The College of Humanities and Social Sciences provides a liberal education as an essential foundation for the student's preparation for a satisfying career. The college maintains an emphasis on the fundamental understanding of our cultural heritage, combined with development of a thorough background of knowledge in the student's specific area of interest. It seeks to promote in students critical and objective thinking, analytical skill, and a keen awareness of their responsibilities to society.

## College Majors

Anthropology
Criminology
Economics
English
Foreign Languages and International Trade
French
Geography
German
Government and Public Service
History
International Studies
Journalism
Law School Preparation
Philosophy
Political Science
Regional Planning
Religious Studies
Sociology
Spanish

## Degrees

The departments of Anthropology, Criminology, Economics, English, French, Geography and Regional Planning, German, History, Journalism, Philosophy and Religious Studies, Political Science, Spanish and Classical Languages, and Sociology offer work leading to a Bachelor of Arts degree. The Bachelor of Science is offered in Regional Planning. Master of Arts or Master of Science degrees are offered by Criminology, English, Geography and Regional Planning, History, Political Science, and Sociology. The English and Criminology departments offer the Doctor of Philosophy degree. Information about these graduate programs may be obtained from the Graduate School.

## Degree Requirements

In addition to the university's Liberal Studies requirements, all students seeking a baccalaureate degree in the College of Humanities and Social Sciences must complete the requirements for a major as established by the department through which they wish to specialize. Statements of these requirements, and the requirements for those minoring in a specific field, appear in the department sections that follow. A double major or minor may encompass a discipline outside as well as within the college but should be selected only with advisor approval. As a general principle, there is considerable latitude in course choice for Humanities and Social Sciences majors. The intermediate-level foreign language requirement (a description follows) applies without exception to all Humanities and Social Sciences four-year degree programs.

## College Foreign Language Requirements

Students in the Colleges of Natural Sciences and Mathematics and of Humanities and Social Sciences must demonstrate an intermediate level of foreign language proficiency as a college requirement for graduation. They may choose any of the languages offered, including self-instruction in the Critical Languages, described below. Intermediate-level foreign language courses in French, German, Latin, and Spanish will also count as Liberal Studies electives.

For students with previous foreign language instruction or experience, individual placement into foreign language courses may be done during placement testing and registration prior to the first semester at IUP. Students whose placement test demonstrates competence equivalent to the intermediate level are considered to have fulfilled the foreign language requirement. Students with no previous foreign language background will take entry-level courses, which may be counted as free electives in the total required for graduation.

Any foreign student, registered as such at IUP, whose acquired native language is other than English and who demonstrates an acceptable proficiency in English, is exempt from the foreign language requirement if the department of the student's major does not require a specific foreign language.

### Critical Language Program

The Critical Language Program is a self-instructional/tutorial approach to less commonly taught foreign languages. Students meet with a tutor three hours per week in addition to practicing with audio cassettes. Most tutors are native speakers of the language. Professional teachers of the specific language may be brought in from other universities to evaluate student performance. The final grade is based on final examination as well as on performance during the tutorial sessions. Interested students must contact the coordinator before registration. Each course carries three semester hours of credit.

The following languages may be available for study: Arabic, Chinese, Dutch, Modern Greek, Modern Hebrew, Hindi, Hungarian, Italian, Japanese, Korean, Portuguese, Russian, and Turkish.

### Foreign Study Programs

College majors may be interested in the various Foreign Study Programs and Tours offered. Credits obtained through such arrangements normally are applicable toward a Humanities and Social Sciences degree. Also of interest are the college's credit-awarding programs at Valladolid (Spain), Duisburg (Germany), and Nancy (France), as well as the Summer Study in Mexico Program. For further information, contact the chair of the appropriate language department.

**IUP at Valladolid:** Through the Spanish and Classical Languages Department, the university has offered a spring semester of study at the University of Valladolid, Spain, for more than thirty-five years. The participants live in private homes. For details and brochures, contact the Department of Spanish and Classical Languages.

**IUP at Duisburg:** IUP has a study abroad program at the University of Duisburg, West Germany. The program is open to German majors and other students having specific interest in a foreign study experience. Students must register for FL100 and pay a foreign exchange fee for each semester in the program. For further information, contact the German Department.

**IUP at Nancy:** IUP has established a study program with the University of Nancy, France. Participants in the Nancy program must pay a foreign exchange fee for each semester in the program. For details, contact the French Department.

**IUP at Mexico Summer Program:** The Spanish and Classical Languages Department sponsors a program of study in Spanish language in Mexico. The program is located at Cuernavaca, and the cost of the program includes transportation, complete room and board, insurance, and tuition. The student may earn up to six hours of undergraduate or graduate credit. Internship opportunities are available for students with fluency in Spanish. For details and brochures, contact the Department of Spanish and Classical Languages.

**IUP at Costa Rica Summer Program:** The Department of Spanish and Classical Languages has also established a four-week study program at the National University of Costa Rica, located in Heredia. Participants live with Costa Rican families and take classes at the university. This program is intended for students who are going abroad for the first time, and preference is given to beginning students. Participants earn four transfer credits in Spanish from the UNA. For details and brochures, contact the Department of Spanish and Classical Languages.

### Pre-Law Program

The College of Humanities and Social Sciences offers a pre-law program that prepares the student for application to law school. This program is in the following Social Sciences, Humanities, and Business departments: Business, Criminology, Economics, English, History, Philosophy, and Political Science. All programs are designed as part of a baccalaureate degree and as preparation for law school.

Coursework in the pre-law program centers upon a carefully developed interdisciplinary minor. For detailed guidance in pre-law, students should consult the pre-law advisor in their major department.

### Internship Programs

Humanities and Social Sciences departments have extensive internship programs which allow students to engage in supervised off-campus work experience for credit. IUP students have worked in Harrisburg as aides to state legislators, with the Governor's Justice Commission and the Local Government Commission, and with the Investigations Division, Pennsylvania Department of Justice. Others have worked at correctional institutions in Pittsburgh, Greensburg, and Warrendale, as peer group counselors on the local campus, as assistants to the Pennsylvania state Republican chairperson, as on-site guides at the United Nations, as workers on an Israeli kibbutz, and as student aides for the Department of Education in Puerto Rico. Other students have worked in the Pittsburgh federal probation office. Many students have worked with major political parties and candidates at the local and state levels. At the county level, they have been attached to the offices of the county planner, the Common Pleas Court, the coroner, the treasurer, commissioners, and the borough manager. Students have also worked in the Washington offices of Pennsylvania congressmen and in many federal and international organizations in Washington as well. Opportunities for internships in other countries also exist. For more information about specific internship programs, students should consult with the chair of the department in which the student is majoring.

### Pan-African Studies Minor

The Pan-African Studies minor is a multidisciplinary program that brings together courses focusing on the vitality and accomplishments of pre-colonial African societies, the cultural and racial heritages of people of African descent in relationship to western societies, and aspects of modern-day African cultures. The cluster of courses included in this program represents a broad diverse look at the diaspora of people of African origin.

The minor helps IUP students to enrich their cross-cultural studies; to heighten their awareness of, and sensitivity to, cultural diversity; and to expand their knowledge of world contributions of persons of African heritage. A Pan-African studies minor is thus valuable in an increasingly diverse society and attractive to employers and graduate schools alike.

**Minor—Pan-African Studies** **18**

| | | | |
|---|---|---|---|
| **Required courses:** | | | **6** |
| AF131 | Introduction to Pan-African Studies | 3sh | |
| HI365 | The History of Black America Since Emancipation | 3sh | |
| **Electives: Four courses from the following list:** | | | **12 (1)** |
| AF281 | Special Topics in Pan-African Studies | 3sh | |
| AF481 | Special Topics in Pan-African Studies | 3sh | |
| AF482 | Independent Study | 3sh | |
| AN/SO271 | Cultural Area Study: Africa | 3sh | |
| CM380 | The History of African Americans in Film | 3sh | |
| EC339 | Economic Development I | 3sh | |
| EN348 | African-American Literature | 3sh | |
| GE255 | Geography of Africa | 3sh | |
| HI355 | African History I - Antiquity to 1600 | 3sh | |
| HI356 | African History II - 1600 to Present | 3sh | |
| HI366 | African-American Women | 3sh | |
| PS382 | African Politics | 3sh | |
| RS360 | African Religions | 3sh | |

1. With the program coordinator's approval, three credits of an internship may be counted towards the Pan-African studies minor.

## Department of Anthropology

**Miriam S. Chaiken, Chairperson; Conelly, Garcia, Kruckman, P. Neusius, S. Neusius, Olin-Fahle; and professor emerita Lanham**

The Anthropology Department promotes awareness of anthropological knowledge and methods and seeks to further the discipline and its applications to the problems of the contemporary world. Through teaching, research, and involvement in campus and community events and programs, the anthropology faculty members contribute to the liberal education of IUP students. The anthropology major itself equips students with knowledge and skills needed for full participation in the global environment of the twenty-first century.

Anthropology emphasizes the study of human biological and cultural diversity within its four subfields: sociocultural anthropology, biological anthropology, linguistics, and archaeology. All students receive a solid foundation in the discipline of anthropology and tailor their major to specific interests by following one of the three tracks.

The General Anthropology track continues the student's education in all of the subfields of anthropology, preparing the student for a graduate education

in anthropology or in one of many related fields. The general track also provides a solid base for interdisciplinary study with a number of other fields including biology, philosophy, political science, psychology, religious studies, sociology, and Spanish.

The Archaeology track provides an emphasis on the study of culture through the material remains of human behavior. This track provides training for careers in the growing fields of cultural resource management and historic preservation, with opportunities for employment in both government and the private sector. A wide variety of internship opportunities provide hands-on training in these areas.

The Applied Anthropology track provides students with a background in anthropological method and theory, a cross-cultural perspective, and an avenue to translate this knowledge into action through internships and research. Examples of career opportunities include program design, implementation, and evaluation; policy analysis and administrative and managerial development; assessment of current and future human needs; and creation of strategies for social intervention and advocacy. In consultation with an advisor, each student will develop his or her own curriculum in order to build expertise in a specific topical area.

The department also offers preparation for teaching social studies with a concentration in anthropology. This program leads to a Bachelor of Science in Education degree. With its emphasis on cross-cultural comparisons, the realities of contemporary global cultures, and cultural resource management, anthropology provides a solid foundation for teaching social science at the secondary level. The department also offers a minor in anthropology.

## Bachelor of Arts—General Anthropology Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-54**
**Mathematics:** MA217
**Social Science:** SO151 (recommended)
**Liberal Studies electives:** BE/CO/IM101 (recommended), no courses with AN prefix

**College:** **0-6**
Foreign Language Intermediate Level (1)

**Major:** ***33***
**Required courses:**

| | | |
|---|---|---|
| AN211 | Cultural Anthropology | 3sh |
| AN222 | Biological Anthropology | 3sh |
| AN233 | Language and Culture | 3sh |
| AN244 | Basic Archaeology | 3sh |
| AN456 | Field Research Methods | 3sh |

**Controlled electives:**

| | |
|---|---|
| One theory course: AN480 or SO447 (2) | 3sh |
| Three courses in Topical Area Ethnography such as: AN271, 272, 273, 274, 314 | 9sh |
| Two additional AN electives (300 or 400 level) | 6sh |

**Other Requirements:** **0**

**Free Electives:** **37-38**

**Total Degree Requirements:** **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) SO447: Modern Sociological Theory may be taken only with approval of the advisor.

## Bachelor of Arts—Anthropology/Archaeology Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-54**
**Mathematics:** MA217
**Natural Science:** GS121/122-131/132 (recommended)
**Social Science:** SO151 (recommended)
**Liberal Studies electives:** BE/CO/IM101 (recommended), no courses with AN prefix

**College:** **0-6**
Foreign Language Intermediate Level (1)

**Major:** **36**
**Required courses:**

| | | |
|---|---|---|
| AN211 | Cultural Anthropology | 3sh |
| AN222 | Biological Anthropology | 3sh |
| AN233 | Language and Culture | 3sh |
| AN244 | Basic Archaeology | 3sh |

**Controlled electives:**
**Three methods courses:**

| | | |
|---|---|---|
| AN317 | Archaeological Research Design and Analysis | 3sh |
| AN320 | Archaeological Field School (2) | 6sh |
| AN415 | Cultural Resource Management | 3sh |

| | |
|---|---|
| **One theory course:** AN480 or SO447 (3) | 3sh |
| Two area courses, one in archaeology and one in ethnography, such as: AN213 or 315 and AN314 or AN271/272/273/274 | 6sh |
| One topical course such as: AN401 or 420 | 3sh |

**Other Requirements:** **0**

**Free Electives: (4)** **37-38**

**Total Degree Requirements:** **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) For approval by advisor, an equivalent field school of another university must have a lab component.
(3) SO447 Modern Sociological Theory may be taken only with approval of the advisor.
(4) A minor in Geoscience, Geography, History, or other approved field is recommended. An internship (AN493) also is recommended. Your advisor should be consulted.

## Bachelor of Arts—Anthropology/Applied Anthropology Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-54**
**Mathematics:** MA217
**Social Science:** SO151 (recommended)
**Liberal Studies electives:** BE/CO/IM101, no courses with AN prefix

**College:** **0-6**
Foreign Language Intermediate Level (1)

**Major:** ***36***
**Required courses:**

| | | |
|---|---|---|
| AN211 | Cultural Anthropology | 3sh |
| AN222 | Biological Anthropology | 3sh |
| AN233 | Language and Culture | 3sh |
| AN244 | Basic Archaeology | 3sh |

**Controlled electives:**

| | |
|---|---|
| Two methods courses: AN360, 456 | 6sh |
| One theory course: AN480 or SO447 (2) | 3sh |
| One area course: AN314 or AN271/272/273/274 | 3sh |
| Two additional AN electives (300 or 400 level) | 6sh |
| Internship in Anthropology (3) | 6sh |

**Other Requirements: (recommended)** **0**

| | |
|---|---|
| EN322 | Technical Writing |
| SO231 | Contemporary Social Problems |
| SO457 | Computer Use in Sociology |

**Free Electives:** **34-35**

**Total Degree Requirements:** **124**

1. Intermediate-level Foreign Language may be included in Liberal Studies electives.
2. SO447 Modern Social Theory may be taken only with permission of the advisor.
3. Internship is highly recommended but may be replaced by 6sh of pragmatic skill courses upon approval of advisor.

### Bachelor of Science in Education—Social Sciences Education/Anthropology Concentration (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-55**
**Social Science:** AN211, EC121, PC101
**Liberal Studies electives:** EC122, GE230, no courses with AN prefix

**College:** **30**
**Professional Education sequence: (1)**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| ED455 | Teaching of Social Science in Secondary Schools | 3sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** **21**
**Required Anthropology courses:**

| | | |
|---|---|---|
| AN211 | Cultural Anthropology | *sh |
| AN222 | Biological Anthropology | 3sh |
| AN233 | Language and Culture | 3sh |
| AN244 | Basic Archaeology | 3sh |

**Two area ethnography courses:**
(AN271, AN272, AN273, or AN314) 6sh
Two additional Anthropology courses numbered 300 or above 6sh

**History Distributional Requirements:** **9**
Any two History courses which focus on the U.S. 6sh
Any Non-Western or World History course 3sh

**Required Social Science Distribution:** **6**
PS280 or 285 3sh
GE104, 252, 255, 256, or 257 3sh

**Other Requirements:** **0**

**Free Electives: (2)** **0-17**

**Total Degree Requirements:** **124**

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).
(2) If certain courses are chosen for Social Sciences major, they may also fulfill Liberal Studies requirements and permit additional free electives.

### Minor—Anthropology 15

**Required course:**

| | | |
|---|---|---|
| AN110 | Contemporary Anthropology | 3sh |

**Controlled electives:**
Four additional courses in Anthropology 12sh

## Department of Criminology

**Mark E. McNabb, Chairperson; Austin, Culliver, Gibbs, Gido, Hanrahan, Martin, McCauley, Merlo, Moyer, Mutchnick, J. Thomas, Wilson, Zimmerman**

The Department of Criminology offers men and women seeking careers in criminology a broad liberal arts education supported by a professional education program. The degree offered is the Bachelor of Arts with a major in Criminology, under the College of Humanities and Social Sciences; students may also minor in Criminology. Through the Graduate School the department offers graduate work at the master's and doctoral level.

**The program in Criminology has a five-fold objective:**
1. The education of students for employment and leadership in the expanding field of criminology and criminal justice
2. The education of presently employed criminal justice personnel who recognize a need for furthering their education
3. The instruction of students who wish to acquire an understanding of the processes of criminal justice as a cultural part of their higher education
4. The instruction of students who wish to prepare for graduate study and/or research in criminology
5. A curriculum that provides an excellent foundation for students preparing for a career in law

Nearly every level of government offers opportunities for professional careers in criminology. Employment opportunities normally exist in more than fifty federal agencies, including the Federal Bureau of Investigation, U.S. Secret Service; U.S. Postal Inspectors; Drug Enforcement Agency; Bureau of Alcohol, Tobacco, and Firearms; National Security Agency; U.S. Marshals; the Internal Revenue Service; and military investigative branches. Graduates will find employment in local and state law enforcement, probation, parole, and the custody and treatment of adult and youthful offenders. There are also a wide variety of opportunities in the expanding fields of private, commercial, and industrial security. In addition, many governmental agencies have specialized units dealing with juveniles, community relations, training, education, and research.

Career opportunities are available also in research and teaching at the college and university levels and in research divisions of various agencies.

Students who wish to change their major or minor to Criminology or Pre-Law Criminology must have an overall QPA of 2.5 to declare the major or minor and to be accepted formally by the department.

For new entering freshmen, the department will utilize a junior status screening criteria and procedure for junior status approval as described in the section "Sophomore Screening for Junior Status Approval."

### Bachelor of Arts—Criminology

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-55**
**Liberal Studies electives:** no courses with CR prefix

**College:** **0-6**
Foreign Language Intermediate Level (1)

**Major:** **36**
**Required courses:**

| | | |
|---|---|---|
| CR102 | Survey of Criminology | 3sh |
| CR210 | Criminal Law | 3sh |
| CR300 | Theory of Complex Criminal Justice Organizations | 3sh |
| CR306 | Research Methods | 3sh |
| CR400 | Theoretical Criminology | 3sh |
| CR401 | Contemporary Issues in Criminology | 3sh |

**Controlled electives:**

| | |
|---|---|
| One course from list: CR416, 451, 470, 491 | 3sh |
| Five additional Criminology courses | 15sh (2) |

**Free Electives: (3)** **27-35**

**Total Degree Requirements:** **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) No more than 6sh of CR493 Internship may be applied to 36sh minimum in major.
(3) Students selecting a minor may apply no more than 15sh outside the College of Humanities and Social Sciences without special approval.

### Bachelor of Arts—Criminology/Pre-Law

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-55**
**Liberal Studies electives:** no courses with CR prefix

**College:** **0-6**
Foreign Language Intermediate Level (1)

| | | | |
|---|---|---|---|
| **Major:** | | | 36 |
| **Required courses:** | | | |
| CR102 | Survey of Criminology | 3sh | |
| CR210 | Criminal Law | 3sh | |
| CR300 | Theory of Complex Criminal Justice Organizations | 3sh | |
| CR306 | Research Methods | 3sh | |
| CR400 | Theoretical Criminology | 3sh | |
| CR401 | Contemporary Issues in Criminology | 3sh | |
| **Controlled electives:** | | | |
| One course from list: CR416, 451, 470, 491 | | 3sh | |
| Five additional Criminology courses | | 15sh (2) | |
| **Other Requirements: Pre-law interdisciplinary minor** | | | 15-21 |
| Seven courses, including at least one from each of six areas: | | | |
| **Business:** AG201, AG202, BL235 | | | |
| **Economics:** EC121, 122, 332 | | | |
| **English:** EN212, 220, 310 | | | |
| **History:** HI320, 321, 346 | | | |
| **Philosophy:** PH101, 222, 450 | | | |
| **Political Science:** PS358, 359, 361 | | | |
| **Free Electives: (3)** | | | 6-20 |
| **Total Degree Requirements:** | | | 124 |

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) No more than 6sh of CR493 Internship may be applied to 36sh minimum in major.
(3) Students selecting a minor may apply no more than 15sh outside College of Humanities and Social Sciences without special approval.

## Minor—Criminology (1) 18

| | | |
|---|---|---|
| **Required courses:** | | |
| CR102 | Survey of Criminology | 3sh |
| CR210 | Criminal Law | 3sh |
| CR300 | Theory of Complex Criminal Justice Organizations | 3sh |
| CR306 | Research Methods | 3sh |
| CR400 | Theoretical Criminology | 3sh |
| CR401 | Contemporary Issues in Criminology | 3sh |

(1) Must have formal criminology department approval to be admitted to minor in Criminology.

# Department of Economics

**Donald A. Walker, Chairperson; Asamoah, Cross, Dyal, Garvin, Holt, Karatjas, Martel, Radakovic, Radell, Stonebraker, Ware**

Economics provides a background and educational base that open a broad range of professional, educational, and vocational opportunities. As part of a Humanities and Social Science degree, a Bachelor of Arts in economics provides a liberal education as well as professional and technical training. Indeed, many students completing an undergraduate major in economics do not pursue careers as professional economists; they enter such fields as law, management, finance, and labor relations. By helping to develop a student's ability to think and communicate, economics provides a firm foundation upon which the student can build any one of a large number of possible careers.

Four different degree programs are available: a Bachelor of Arts in Economics that prepares students for immediate employment or graduate school; a pre-law Bachelor of Arts in Economics for students who wish to attend law school; a Bachelor of Arts in Economics/Mathematics combining courses in both areas to prepare students for graduate study in economics as well as possible immediate employment; and the Bachelor of Science in Education that prepares students to teach economics and other social sciences in secondary schools.

The Department of Economics offers concentrations in six areas of Economics. The concentrations are designed to equip students with the education and skills that will help to enable them to obtain a position in government or private business upon completion of the undergraduate program. The concentrations available at present are

— Competition and Public Policy
— Economics of Government Affairs
— International Economics
— Labor Economics
— Managerial Economics
— Monetary Economics
— Quantitative Economics

Detailed information regarding these concentrations may be obtained from the department chairperson. Concentrations are not restricted to Economics majors.

Either EC101 Basic Economics or EC121 Principles of Economics will count as a Liberal Studies social science course. However, EC101 is intended for students who will take only one course in the field. Students who anticipate taking more than one economics course should schedule EC121. EC101 will not count toward either a major or minor in economics and may not be taken after the successful completion of, or in concurrent registrations with, any other economics course.

Economics majors are encouraged to minor in one of the other Social Sciences, in Business, or in Mathematics.

The Department of Economics houses the Center for Economic Education. The center is a nonprofit, nonpartisan organization affiliated with both the Pennsylvania Council on Economic Education and the National Council on Economic Education. Its mission is to upgrade the quality of economic education in kindergarten through twelfth grade. The center performs the following functions: teacher training, consulting services, research, materials development, and programs in economic education for adults. Drs. Nicholas Karatjas and Arthur H. Martel are the co-directors of the center.

## Bachelor of Arts—Economics

| | | | |
|---|---|---|---|
| **Liberal Studies:** As outlined in Liberal Studies section with the following specifications: | | | 53-56 |
| **Social Science:** EC121 | | | |
| **Mathematics:** MA110 or 121 (1) | | | |
| **Liberal Studies electives:** no courses with EC prefix | | | |
| **College:** | | | 0-6 |
| Foreign Language Intermediate Level (2) | | | |
| **Major:** | | | 24 |
| **Required courses:** | | | |
| EC121 | Principles of Economics I | *sh | |
| EC122 | Principles of Economics II | 3sh | |
| EC355 | Statistics for Economists | 3sh (3) | |
| EC421 | Macroeconomic Analysis | 3sh | |
| EC422 | Microeconomic Analysis | 3sh | |
| MA121 | Calculus I for Natural and Social Sciences and Business | *sh (1) | |
| **Controlled electives:** | | | |
| Four other EC courses | | 12sh (4) | |
| **Free Electives:** | | | 38-47 |
| **Total Degree Requirements:** | | | 124 |

(1) MA123 or 127 may be substituted for MA121.
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(3) MA214, 217 or 363 may be substituted for EC355.
(4) No more than six hours of Internship credit may be applied toward major.

## Bachelor of Arts—Economics/Pre-law

| | | |
|---|---|---|
| **Liberal Studies:** As outlined in Liberal Studies section with the following specifications: | | 53-56 |
| **Social Science:** EC121 | | |
| **Mathematics:** MA110 or 121 (1) | | |
| **Liberal Studies electives:** no courses with EC prefix | | |
| **College:** | | 0-6 |
| Foreign Language Intermediate Level (2) | | |

**Major:** 24
**Required courses:**

| | | |
|---|---|---|
| EC121 | Principles of Economics I | *sh |
| EC122 | Principles of Economics II | 3sh |
| EC355 | Statistics for Economists (3) | 3sh |
| EC421 | Macroeconomic Analysis | 3sh |
| EC422 | Microeconomic Analysis | 3sh |
| MA121 | Calculus I for Natural and Social Sciences and Business (1) | *sh |

**Controlled electives:**
Four other EC courses 12sh (4)

**Other Requirements: Pre-law interdisciplinary minor** 6-21
Seven courses, including at least one from each of six areas:
**Business:** AG201, AG202, BL235
**Criminology:** CR210. 260, 357
**English:** EN212, 220, 310
**History:** HI320, 321, 346
**Philosophy:** PH101, 222, 450
**Political Science:** PS358, 359, 361

**Free Electives:** 17-36

**Total Degree Requirements:** 124

(1) MA123, or 127 may be substituted for MA121.
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(3) MA214. 217, or 363 may be substituted for EC355.
(4) No more than six hours of Internship credit may be applied toward major.

## Bachelor of Arts—Economics/Mathematics

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 47-49
**Social Science:** EC121 (included in major)
**Mathematics:** MA127 (included in major)
**Electives:** Intermediate foreign language, no course with EC or MA prefix.

**Major:** 54-56
**Core:**

| | | |
|---|---|---|
| EC121 | Principles of Economics I | 3sh |
| EC122 | Principles of Economics II | 3sh |
| EC421 | Macroeconomic Analysis | 3sh |
| EC422 | Microeconomic Analysis | 3sh |
| MA127 | Calculus I | 4sh |
| MA128 | Calculus II | 4sh |
| MA227 | Calculus III | 4sh |
| MA171 | Introduction to Linear Algebra | 3sh |
| MA216 or EC355 Statistics | | 3-4sh |

**Economics Electives:** 12
Students are especially encouraged to take EC334 and EC356, but any course except EC101 may be used. EC493 may be counted only with the approval of the program coordinator.

**Mathematics Electives:** 12-13
**At least one of the following two-semester sequences:**
MA241 Differential Equations and MA371 Linear Algebra
MA363 and 364 Mathematical Statistics I and II
MA445 and 446 Programming and Probabilistic Models in Operations Research
**Two additional courses either from the above or from the following:**

| | |
|---|---|
| MA271 | Introduction to Algebraic Structures |
| MA342 | Advanced Mathematics for Applications |
| MA417 | Statistical Applications or |
| MA418 | Sampling Survey Theory and Its Applications |
| MA421 | Advanced Calculus I |
| MA422 | Advanced Calculus II |
| MA423 | Complex Variables I |
| MA425 | Applied Mathematical Analysis I |
| MA427 | Introduction to Topology |
| MA465 | Topics in Statistics |
| MA476 | Abstract Algebra I |
| MA477 | Abstract Algebra II |

**Other Requirements:** 0

**Free Electives:** 19-23

**Total Degree Requirements:** 124

## Bachelor of Science in Education—Social Science Education/Economics Track (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Social Science:** PC101, PS111, AN110 or AN211
**Mathematics:** MA110 or 217 or 121
**Liberal Studies electives:** GE230, SO337

**College:** 30
**Professional Education sequence: (1)**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| ED455 | Teaching of Social Science in the Secondary Schools | 3sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurement | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 21
**Required Economics courses:**

| | | |
|---|---|---|
| EC121 | Principles of Economics I | 3sh |
| EC122 | Principles of Economics II | 3sh |

**Controlled Economics electives:** 15sh
Upper-level Economics courses including at least one writing-intensive course and at least one course from each of the following three groups:
**International courses:** EC339, 345, 350, 351
**Macroeconomic courses:** EC325, 343, 421
**Microeconomic courses:** EC283, 330, 331, 332, 333, 335, 336, 373, 383

**Other Requirements:** 15-18
Required Social Science distribution

| | | |
|---|---|---|
| HI203 | U.S. History for Historians | 3sh |
| GE___ | | 3sh |
| PS280 or PS285 | Comparative Government | 3sh |
| Social Science minor | | 6-9sh (2) |

**Free Electives:** 0-4

**Total Degree Requirements:** 124

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).
(2) Students must complete a minor in second Social Science of their choice. The coursework for each alternative is described below. Some of the courses chosen may also fulfill the third Liberal Studies elective course above.
1. Anthropology: AN110 or 211, 12 additional sh in AN
2. Geography: GE230 and 12 additional sh in GE
3. History: HI195, 203, 9 additional sh in HI
4. Political Science: PS111, 280 or 285, 9 additional sh in PS
5. Sociology: SO151, 237, 9 additional sh in SO

## Minor in Economics 15

**Required courses:**

| | | |
|---|---|---|
| EC121 | Principles of Economics I | 3sh |
| EC122 | Principles of Economics II | 3sh |
| Three courses from EC200 or higher | | 9sh |

## Department of English

**Donald S. McClure, Chair; Gail I. Berlin, Assistant Chair; Aghbar, Alvine, Bencich, Berlin, L. Black, Bower, Cahalan, Carse, Chow, Comfort, Curey, Dandurand, Downing, Emerick, Fritz, Gatti, Gebhard, Goebel, Gray, Hartwell, M. Hayward, N. Hayward, Heny, B. Hudson, S. Hudson, Hurlbert, R.G. Johnson, S. F. Johnson, Kilwein-Guevara, Kraszewski, Krupnik, Masiello, McAndrew, McClenahan, McClure, Rodriguez-Milanes, Murphy, Norris, Orchard, Pagnucci, Perdue, Rafoth, Roffman, Savova, Shafer, Slater, Smits, Tannacito, Thomas, Vella, Villa, Welsh, Wheeler, M. M. Williamson, M. T. Williamson, Wilson; and professors emeriti Anderson, Betts, J. Bright, L. Bright, Brown, Craig, Davis, Freund, Grayburn, Miller, Nania, Ray, Rider, Roumm, Seacrist, Seinfelt, Smith, Swigart, Watta, Woodworth**

The program of studies in the English Department at IUP focuses on critical thinking and effective reading and writing at all levels. English majors study a wide variety of subjects ranging from literary theory to practical pedagogy, in an atmosphere that encourages and fosters a high degree of professional commitment.

Course choices depend upon a student's career goals; three specialized majors are offered, each of which undergoes regular revision to reflect the needs of students and the structure of a changing, competitive job market.

The B.A. in English Humanities offers a wide range of courses in both traditional and nontraditional areas, which allows students to tailor their programs to reflect their own interests and career plans.

Pre-Law English offers specialized training for those interested in a career in law or some related field.

The English Education program offers special training for prospective secondary school teachers. IUP's consistent success in placing graduates from this major in teaching positions suggests that the program is highly regarded among educators outside the university.

The department offers the following degrees:

### English Humanities

The English Department B.A. Humanities curriculum emphasizes the traditional concerns of English literary study by providing a common core of four courses that provide students with a uniform background in English and American literature, after which they are offered a wide range of choices in six substantial areas of required study. These required and controlled-elective courses constitute 30 credit hours of a major that totals 36; the remaining courses can be any upper-level English elective offerings, but students are urged to explore possibilities carefully with their advisors so as to complete the program best suited to their future goals.

Specifically, after completing the four prerequisite courses and the Liberal Studies English requirements, students must take

- one Period Course (Category A)
- one Form and Theory of Genre Course (Category B)
- one Alternative Literatures Course (Category C)
- one European Tradition Course (Category D)
- one Major Authors Course (Category E)
- one Writing, Speech, Linguistics Course (Category F)
- a minimum of two courses beyond these group requirements. These two courses may be from one or more of the groups, or may be Topics Courses in literature, film, or literary theory.

Students, especially those for whom the B.A. is a terminal degree, are encouraged to seek an internship in their junior or senior year as a means of developing and demonstrating the skills they have acquired.

Since the major can be completed with 36 hours of coursework, students have 27-35 hours outside of the Liberal Studies requirements, depending on their foreign language status, of unspecified coursework. Students should explore their options carefully with their advisor. Beyond the basic requirements of the major, opportunities exist for students to elect courses allowing them to concentrate further in such areas as writing, film, and British or U.S. literature.

### Pre-Law English

Successful lawyers possess excellent skills in writing and speaking and can analyze a problem and explain its solution in clear, logical terms. Pre-Law English prepares the student especially well in these areas and provides the skills and knowledge needed to do well in the law school admissions examination.

Most graduates have had successful internships in the offices of practicing attorneys and government agencies, although an internship remains optional. Students wishing an internship should contact the department director of internships early in their career at IUP.

### Education Program

The English Department offers a program leading to the Bachelor of Science in Education Degree in English Education. This program has been accredited by the National Council for Accreditation of Teacher Education (NCATE). Graduates are prepared to teach in middle, junior high, and senior high schools.

English Education majors fulfill all the requirements for state certification, including practical experience in methods courses and student teaching; content preparation in a variety of literature, language, and composition courses; and philosophical background in current theories of teaching. Although most students choosing an English Education major will be fitted both by training and desire for the secondary school classroom, those who opt not to teach will find that their speaking, writing, and management skills can be useful to the media, governmental services, and business.

Program requirements are available at the English Department office. Majors must maintain a QPA average of 2.5. They must be formally admitted to the Teacher Certification Program, a process which includes application and screening within the English Department. This screening involves review of the student's portfolio of written work and faculty evaluations, as well as an interview with English Education faculty. Refer to the section "Admission to Teacher Education and Certification" in the Academic Policies section of this catalog.

### Minor in English

To minor in English, 15 semester hours in English are required beyond the Liberal Studies requirement of EN101, 121, and 202.

Students who choose to minor in English should, if their major department concurs, substitute EN122 for EN121.

### English as a Second Language (ESL) Program

The English department's English as a Second Language curriculum consists of a sequence of courses: EN150 ESL, EN100 ESL, EN101 ESL, EN121 ESL, and EN202 ESL. These courses satisfy the same university and college requirements as their non-ESL equivalents; like the non-ESL courses, they are designed to focus on skills needed for successful use of language in an academic setting. However, the methodology and curriculum for these courses are specially designed to meet the needs of non-native speakers of English, and only non-native students are permitted to enroll in sections designated "ESL." Placement of students in these sections is determined by the results of the English Department ESL Placement Test, given at the beginning of each term.

### Bachelor of Arts—English (@)

**Liberal Studies:** As outlined in Liberal Studies section 53-55
with the following specifications:
**Humanities—Literature:** EN122
**Liberal Studies electives:** no courses with EN prefix

**College:** 0-6
Foreign Language Intermediate Level (1)

**Major:** 36
**Required courses:**

| | | |
|---|---|---|
| EN210 | British Literature to 1660 | 3sh |
| EN211 | British Literature 1660-1900 | 3sh |
| EN212 | American Literature: Beginnings to 1900 | 3sh |
| EN213 | British and American Literature Since 1900 | 3sh |

**Controlled electives: (2) (3)** 24sh
One course from Category A (Period): EN301, 302, 303, 304, 305, 306, 307, 315, 316, 317, 319
One course from Category B (Form and Theory of Genre): EN208, 214, 215, 216, 217, 332, 335, 337, 338
One course from Category C (Alternative Literatures): EN225, 344, 348, 385, 386, 396
One course from Category D (The European Tradition): EN349, 354, 387, 391, 393, 394, 395

One course from Category E (Major Authors): EN430, 432, 434, 436
One course from Category F (Writing, Speech, Linguistics): EN220, 221, 310, 311, 312, 313, 320, 322, 325, 326, 329, 330, 333, 334, 336, 420, 422
Two courses from Category G: Any combination of six semester hours from EN281, 356, 357, 390, 401, 460, 461, 462, 481, 482, 493, and/or any other courses listed above under categories A through F.

**Other Requirements:** 0

**Free Electives: (3)** 27-35

**Total Degree Requirements:** 124

(@) Program requirements pending Council of Trustees approval.

1. Intermediate-level Foreign Language may be included in Liberal Studies electives.
2. Any EN281, 481, or 482 course must have prior approval from department chair if it is to apply to the student's major other than in Category G.
3. An internship, aside from counting for six semester hours toward the major, makes the B.A. degree recipient much more employable by providing job experience. Students should see the English B.A. Program Internship Director for advice about available openings.

## Bachelor of Arts—English/Pre-Law (@)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Humanities—Literature:** EN122
**Liberal Studies electives:** no courses with EN prefix

**College:** 0-6
Foreign Language Intermediate Level (1)

**Major:** 36
**Required courses:**

| | | |
|---|---|---|
| EN210 | British Literature to 1660 | 3sh |
| EN211 | British Literature 1660-1900 | 3sh |
| EN212 | American Literature: Beginnings to 1900 | 3sh |
| EN213 | British and American Literature Since 1900 | 3sh |

**Controlled electives: (2) (3)** 24sh
One course from Category A (Period): EN301, 302, 303, 304, 305, 306, 307, 315, 316, 317, 319
One course from Category B (Form and Theory of Genre): EN208, 214, 215, 216, 217, 332, 335, 337, 338
One course from Category C (Alternative Literatures): EN225, 344, 348, 385, 386, 396
One course from Category D (The European Tradition): EN349, 354, 387, 391, 393, 394, 395
One course from Category E (Major Authors): EN430, 432, 434, 436
One course from Category F (Writing, Speech, Linguistics): EN220, 221, 310, 311, 312, 313, 320, 322, 325, 326, 329, 330, 333, 334, 336, 420, 422
Two courses from Category G: Any combination of six semester hours from EN281, 356, 357, 390, 401, 460, 461, 462, 481, 482, 493, and any other courses listed above under categories A through F.

**Other Requirements: Pre-law interdisciplinary minor** 3-21
Seven courses, including at least one from each of six areas:
**Business:** BL235, AG201, AG202
**Criminology:** CR210, CR260, CR357
**Economics:** EC121, EC122, EC332
**History:** HI320, HI321, HI346
**Philosophy:** PH101, PH222, PH450
**Political Science:** PS358, PS359, PS361

**Free Electives: (3)** 6-26

**Total Degree Requirements:** 124

(@) Program revision pending Council of Trustees approval.

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Any EN281, 481, or 482 course must have prior approval from department chair if it is to apply to the student's major other than in Category G.
(3) An internship with a law firm, public agency, or legislative office greatly strengthens law school applications.

## Bachelor of Science in Education—English Education (*)(@)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Humanities—Literature:** EN122
**Fine Arts:** TH101
**Social Science:** PC101
**Liberal Studies electives:** Intermediate-Level Foreign Language, no courses with EN prefix

**College:** 30
**Professional Education sequence: (1)**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| ED452 | Teaching of English and Communication in the Secondary School | 3sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurement | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 40
**Required courses:**

| | | |
|---|---|---|
| EN212 | American Literature: Beginnings to 1900 | 3sh |
| EN220 | Advanced Composition I | 3sh |
| EN314 | Speech and Communication in the Secondary English Classroom | 3sh |
| EN318 | Literature for Adolescents | 3sh |
| EN323 | Teaching Literature and Reading in the Secondary School | 3sh |
| EN324 | Teaching and Evaluating Writing | 3sh |
| EN329 | The History of the English Language | 1sh |
| EN330 | The Structure of English | 3sh |
| EN434 | Shakespeare | 3sh |

**Controlled electives:**

| | |
|---|---|
| Choose one Genre course: EN214, 215, 216, 217 | 3sh |
| Choose one British Literature Survey: EN210, 211 | 3sh |
| Choose one Theme course: EN344, 348, 386 | 3sh |
| Choose two additional courses from list: EN208, 210, 211, 213, 214, 215, 216, 217, 221, 319, 320, 322, 333, 336, 337, 344, 348, 386 | 6sh |

**Other Requirements:** 0

**Free Electives:** 2-4

**Total Degree Requirements:** 124

(@) Program revision pending Council of Trustees approval.

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).

## Department of French

**Robert L. Whitmer, Chairperson; Henry, Jones, Liscinsky, McCreary, Op de Beeck; and professor emeritus Fisel**

The Department of French offers a varied curriculum designed to provide not only basic language instruction but also the more advanced competencies needed by language specialists and students hoping to take advantage of an international study experience. For the French major, the department has three degree programs: B.S. in Education (K-12), B.A. in Liberal Arts, and the B.A. in French for International Trade. The latter degree program provides solid undergraduate training preparatory to an M.B.A. in International Marketing and Finance.

Students majoring in French will acquire proficiency in all phases of the language and enter more deeply into the history, culture, and literature of Francophone countries. They will also gain some knowledge of the linguistic development of the language throughout the centuries. French majors generally find employment in government work, librarianship, journalism, foreign trade, airlines, tourism, business, and teaching. Students choosing careers as teachers will find the close supervision and advanced methodology offered by the department a distinct asset.

### College Language Requirements

Students in the College of Humanities and Social Sciences and in the departments of the College of Natural Sciences and Mathematics must pass the intermediate sequence of a foreign language (FR201-FR202 or FR203) or demonstrate that they have somehow acquired the equivalent proficiency level. Students from the other colleges may choose to take French (201 and 202 or the accelerated 203) to fulfill a Liberal Studies elective. Any student who chooses French has an option to enroll in the traditional, three-credits-per-semester courses or the accelerated, six-credit track.

### Placement/Exemption

The student with no previous French study will take FR101 (four credits) as a prerequisite. Students with previous French study will be placed into the appropriate course level by means of a written departmental exam administered in the summer for entering freshmen and during the first week of each term for other students. No student judged to be a native speaker of French will be allowed to enroll in any course below the 300 level, with the exception of FR254.

### French for Elementary Education

A student in Elementary Education may elect a concentration of 18 semester hours of French, consisting of the following:

| | |
|---|---|
| FR201-202 | 6sh |
| FR221-222 | 4sh |
| FR321-322 | 2sh |
| FR351-352 | 6sh |

A student in Elementary Education interested in bilingual elementary teaching may, through special scheduling arrangements, increase the concentration in French to include foreign study and foreign child-centered internship experience.

### Study Abroad—Nancy, France

IUP has established a study abroad center in Nancy, France. All majors are encouraged to participate in the Study Abroad Program, especially those seeking the International Trade degree. Students have an option to participate in a full-year or one-semester program (spring). A six-week summer session has also been added to the options available. Nonmajors may be accepted into any of the programs but must enter the language courses offered in the Cours pour etrangers (Courses for Foreign Students). All credits are evaluated by the department as transfer credits. For further information regarding the cost and application procedures, contact the office of the dean of the college.

### Internships

The Department of French, through contacts with certain French companies and through its affiliation with the ICN (Institut Commercial de Nancy), is able to place summer interns in Paris and other sites in France. The internship (generally six to twelve credits) is viewed as a highly desirable culminating experience following study in Nancy. For further information, contact the office of the dean of the college at least six months in advance.

### Bachelor of Arts—French

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-55**
**Liberal Studies electives:** no courses with FR prefix

**College:** **0**
Foreign Language (included in major)

**Major:** **36**
**Required courses:**

| | | |
|---|---|---|
| FR201 | College French I | 3sh (1) |
| FR202 | College French II | 3sh (1) |
| FR221 | Conversation III | 2sh |
| FR222 | Conversation IV | 2sh |
| FR321 | Advanced Conversation I | 1sh |
| FR322 | Advanced Conversation II | 1sh |
| FR351 | Advanced French I | 3sh |
| FR352 | Advanced French II | 3sh |
| FR361 | Development of French Culture and Literature I | 3sh |
| FR362 | Development of French Culture and Literature II | 3sh |

**Controlled electives:**
Other French electives: 12sh

**Free Electives:** **33-35**

**Total Degree Requirements:** **124**

(1) FR203 Accelerated College French will substitute for these courses.

### Bachelor of Arts—French for International Trade

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **54-56**
**Mathematics:** MA121
**Social Science:** EC121, PC101, PS101
**Liberal Studies electives:** MA214, no courses with FR prefix

**College:** **0**
Foreign Language (included in major)

**Major:** **36**
**Required courses:**

| | | |
|---|---|---|
| FR201 | College French I | 3sh (1) |
| FR202 | College French II | 3sh (1) |
| FR221 | Conversation III | 2sh |
| FR222 | Conversation IV | 2sh |
| FR254 | Civilization of Modern France | 3sh |
| FR321 | Advanced Conversation I | 1sh |
| FR322 | Advanced Conversation II | 1sh |
| FR351 | Advanced Language I | 3sh |
| FR352 | Advanced Language II | 3sh |
| FR354 | Business French | 3sh |
| FR361 | Development of French Culture and Literature I | 3sh |
| FR362 | Development of French Culture and Literature II | 3sh |

**Controlled electives:**
Two additional FR electives (advanced levels) (2) 6sh

**Other Requirements:**
**Business sequence:** **33**

| | | |
|---|---|---|
| AD321 | Business and Interpersonal Communications | 3sh |
| AG201 | Accounting Principles I | 3sh |
| AG202 | Accounting Principles II | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| EC122 | Principles of Economics II | 3sh |
| FI310 | Finance I | 3sh |
| IM300 | Information Systems: Theory and Practice | 3sh |
| MG311 | Human Behavior in Organizations | 3sh |
| MG330 | Production and Operations Management | 3sh |
| MK320 | Principles of Marketing | 3sh |
| QB215 | Business Statistics | 3sh |

| | |
|---|---|
| **Free Electives:** | **0-1** |
| **Total Degree Requirements:** | **124-125** |

(1) FR203 Accelerated College French will substitute for these courses.
(2) Most students earn additional language credits (up to 18) in semester or year abroad.

## Bachelor of Science in Education—K-12 French Education (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-55**
**Social Science:** PC101
**Liberal Studies electives:** no courses with FR prefix

**College:** **32**
**Professional Education sequence:**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| ED453 | Teaching of Foreign Languages in the Elementary/Secondary Schools | 3sh (2) |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurement | 3sh |
| EX301 | Education of Students with Disabilities in Inclusive Secondary Settings | 2sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** **33**
**Required courses:**

| | | |
|---|---|---|
| FR201 | College French I | 3sh (1) |
| FR202 | College French II | 3sh (1) |
| FR221 | Conversation III | 2sh |
| FR222 | Conversation IV | 2sh |
| FR321 | Advanced Conversation I | 1sh |
| FR322 | Advanced Conversation II | 1sh |
| FR351 | Advanced French I | 3sh |
| FR352 | Advanced French II | 3sh |
| FR361 | Development of French Culture and Literature I | 3sh |
| FR362 | Development of French Culture and Literature II | 3sh |

**Controlled electives:**
Other FR electives 9sh

| | |
|---|---|
| **Other Requirements:** | **0** |
| **Free Electives:** | **4-6** |
| **Total Degree Requirements:** | **124** |

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) FR203 Accelerated College French will substitute for these courses.
(2) ED453 offered only in fall semester.

## Minor—French **21**

**Required courses:**

| | | |
|---|---|---|
| FR201-202 | College French I and II | 6sh |
| FR221-222 | Conversation III and IV | 4sh |
| FR351-352 | Advanced French I and II | 6sh |
| FR321-322 | Advanced Conversation I and II | 2sh |
| FR361 | Development of French Culture and Literature I | 3sh |

# Department of Geography and Regional Planning

**Susan E. Forbes, Chairperson; Begg, Bencloski, Buckwalter, Miller, G. Sechrist, R. Sechrist, Shirey, Watts; and professors emeriti Gault, Kulkarni, Payne, Tepper, Weber**

The Department of Geography and Regional Planning offers three separate degree programs for the geographer, planner, and teacher.

Geography has several traditions of study. Two of the more important traditions are the study of relationships between humans and environment or the ecological tradition and the study of spatial organization, which involves the way people use space on the earth's surface. In both traditions the focus is on understanding regions of the world and the interactions within and between them. Geographers make important contributions to the understanding of all aspects of humankind's use of and impact on the earth's surface.

Regional Planning involves preparing for the future. The demands and effects of a large and growing population require that land use, resource use, settlement patterns, transportation systems, and economic activity be planned. Regional planning is concerned with the social, locational, and environmental aspects of these planning decisions. In the 1990s, economic development has become an important focus for planners

The geography track in social science education offers a geography major equivalent for the student interested in teaching at the junior or senior high levels. New education requirements instituted for the commonwealth specify that geography be taught at all levels in Pennsylvania. Nationally, geography is one of the core subject areas named in the National Education Goals program.

Geography and Regional Planning are in the same department, because "Planning is the art of which geography is the science." Employment opportunities for geographers and regional planners are good. Students will find a wide variety of positions in government, business, industry, planning, and education available. Environmental and locational knowledge gained in the department's programs provide skills needed in the job market. Students interested in obtaining additional career information should visit the departmental office in Room 10, Leonard Hall.

Three degree programs are offered by the department:

1. Bachelor of Arts in Geography
2. Bachelor of Science in Regional Planning
3. Bachelor of Science in Social Science Education/Geography Track

In addition to geography core (GE), there are four tracks for specific geographic competencies: GIS/Cartographer, Environmental Geographer, Economic Geographer, and General Geographer. The regional planning (RP) major offers specific career opportunities in four somewhat parallel tracks: GIS/Cartographer, Environmental Planner, Economic Planner, and Town Manager.

A minor in geography or regional planning is appropriate for majors in all other fields of the natural and social sciences. Students in business may also find a minor in either field relevant. A minor consists of 15 semester hours in GE or RP courses. The department suggests students take the core in either program if graduate study is anticipated.

Geography and Regional Planning department resources include the departmentwide LAN, GIS/Cartography Computer Lab with six Dell workstations, large-format digitizers, size E plotters, zoom transfer scope, color printers, HP laser printer, and PC ARC/INFO and ArcView, AUTOCAD, ARCCAD, ERDAS, IDRISI, Map Info and Atlas*GIS software packages. The Spatial Sciences Research Center (SSRC), directed by Dr. Robert Sechrist, has production facilities for GIS database development using PCARC/INFO and ArcView, ARC CAD, Atlas*GIS, and Map Info. These packages run on the SSRC VAX-based network and eight 486s and eight Pentiums.

The Census Documents Library, in conjunction with Stapleton Library, houses population/housing/socioeconomic/mapping database CDS and other publications used for teaching, research, and planning in community service and local and county governments. The department is also an affiliate of the Bureau of Economic Analysis at the Census Bureau.

The department houses both the National Council for Geographic Education (NCGE), which serves geography educators at all levels with

activities and programs that address geography learning and instructional and research issues in North America, and the Pennsylvania Geographic Alliance (PGA), which is supported by the Pennsylvania Department of Education. PGA provides leadership and professional development opportunities in geography teaching and learning in Pennsylvania. Dr. Ruth Shirey is executive director of NCGE and one of two PGA coordinators in Pennsylvania.

A strong internship program directed by Dr. D. Whit Watts offers placement in conservation, land management, and planning agencies at the local, state, and federal levels.

Majors in geography and in regional planning each have a specific core curriculum that presents a structured approach to the field. Appropriate subfields or tracks are available in both programs to prepare students for graduate work and to support different career options for majors. There are four tracks for the geography major and four tracks for the regional planning major.

### ▪ Geography—General Geography Track

The General Geography Track encourages the major to sample courses from different subfields of the discipline. This track prepares the major for graduate work in geography and related fields of employment. Job options include report writing, research analysis, and data gathering. In government employment, the State Department, Department of Commerce, and the Census Bureau are significant places for geography skills.

### ▪ Geography—Geographic Information Systems and Cartographer Track
### ▪ Regional Planning—Geographic Information Systems and Cartographer Track

The Geographic Information Systems and Cartographer Track prepares students for employment as Geographic Information System Specialists, Facilities Managers, Cartographers, and Remote Sensing professionals. Coursework includes methods for identifying, modeling, and analyzing the spatial organization of human and environmental systems from both practical and theoretical perspectives. Data collection, spatial information management, and graphic presentation are integral skills taught in track courses. Such skills could be used, for example, for analysis of wildlife habitat, utility facility management, or transportation system design and maintenance.

### ▪ Geography—Economic Geographer Track
### ▪ Regional Planning—Economic Developer Track

The Economic Track provides a broad framework of ideas and theories in addition to a task-oriented approach to location analysis. Site planners articulate the needs of the community for economic space, the demands for convenient transport, the role of private enterprise, and the management of growth. This interrelated group of courses is useful to students, because economic geographers and developers are expected to analyze the interactions of concepts and variables. Market analysis for the location of new shopping centers, for example, requires understanding of economic principles, population characteristics, and the local political milieu, all in a spatial context.

### ▪ Geography—Environmental Geographer Track
### ▪ Regional Planning—Environmental Planner Track

The Environmental Track is designed to prepare majors in geography or regional planning for careers in environmental fields or graduate study that leads to a variety of environmental positions. Students who elect this track will acquire knowledge of the physical and human processes that shape the environment, strategies for analyzing environmental issues, and concepts that underlie strategies for ameliorating environmental problems. The skills acquired in this track will enable students to assess the causes, consequences, and solutions to a wide variety of environmental issues such as water pollution, acid rain, or tropical deforestation.

### ▪ Regional Planning—Town Manager Track

The Town Manager Track is designed to prepare planning students for careers in local government and graduate work in public administration. Students electing this track will become familiar with the structure, operation, and actions of municipal government and the political, organizational, and institutional basis of municipal management and decision making. Skills acquired with this track will enable students to undertake a variety of analytic activities designed to describe, project, and prescribe courses of action for municipal improvement.

### Bachelor of Arts—Geography/General Geography Track

| | | | |
|---|---|---|---|
| **Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **Mathematics:** MA121 or 217 **Liberal Studies electives:** No courses with GE prefix | | | **54-58** |
| **College:** | | | |
| Foreign Language Intermediate Level (1) | | | **0-6** |
| **Major:** | | | **36** |
| **Required courses:** | | | |
| GE213 | Cartography I | 3sh | |
| GE230 | Cultural Geography | 3sh | |
| GE231 | Economic Geography | 3sh | |
| GE241 | Physical Geography | 3sh | |
| GE411 | History of Geography | 3sh | |
| GE412 | Research Seminar | 3sh | |
| **Controlled electives:** | | | |
| One course from GE251-257 | | 3sh | |
| Five courses (15sh) from any GE courses [only one GE100 level permitted] | | 15sh | |
| **Free Electives:** | | | **30-34** |
| **Total Degree Requirements:** | | | **124** |

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

### Bachelor of Arts—Geography/GIS and Cartographer Track

| | | | |
|---|---|---|---|
| **Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **Mathematics:** MA121 or 217 **Liberal Studies electives:** CO/IM/BE101 recommended, no courses with GE prefix | | | **54-58** |
| **College:** | | | |
| Foreign Language Intermediate Level (1) | | | **0-6** |
| **Major:** | | | **36** |
| **Required courses:** | | | |
| GE213 | Cartography I | 3sh | |
| GE230 | Cultural Geography | 3sh | |
| GE231 | Economic Geography | 3sh | |
| GE241 | Physical Geography | 3sh | |
| GE411 | History of Geography | 3sh | |
| GE412 | Research Seminar | 3sh | |
| **Controlled elective:** | | | |
| One course from GE251-257 | | 3sh | |
| **Track Courses:** | | | |
| GE313 | Cartography II | 3sh | |
| GE314 | Map and Photograph Interpretation | 3sh | |
| GE316 | Introduction to Geographic Information Systems | 3sh | |
| GE415 | Remote Sensing | 3sh | |
| GE417 | GIS Applications Development | 3sh | |
| **Free Electives:** | | | **30-34** |
| **Total Degree Requirements:** | | | **124** |

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

## Bachelor of Arts—Geography/Economic Geographer Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **54-58**
**Mathematics:** MA121 or 217
**Social Sciences:** EC121
**Liberal Studies electives:** EC122, no courses with GE prefix

**College:**
Foreign Language Intermediate Level (1) **0-6**

**Major:** **36**
**Required courses:**

| | | |
|---|---|---|
| GE213 | Cartography I | 3sh |
| GE230 | Cultural Geography | 3sh |
| GE231 | Economic Geography | 3sh |
| GE241 | Physical Geography | 3sh |
| GE411 | History of Geography | 3sh |
| GE412 | Research Seminar | 3sh |

**Controlled elective:**
One course from GE251-257 3sh

**Track Courses:**

| | | |
|---|---|---|
| GE331 | Population Geography | 3sh |
| GE332 | Urban Geography | 3sh |
| GE333 | Trade and Transportation | 3sh |
| GE334 | Political Geography | 3sh |
| GE464 | Land Use Policy | 3sh |

**Free Electives:** **30-34**
EC383 Urban/Regional Economics recommended

**Total Degree Requirements:** **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

## Bachelor of Arts—Geography/Environmental Geographer Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **54-55**
**Mathematics:** MA121 or MA217
**Liberal Studies electives:** CO/IM/BE101 recommended, no courses with GE prefix

**College:**
Foreign Language Intermediate Level (1) **0-6**

**Major:** **36**
**Required courses:**

| | | |
|---|---|---|
| GE213 | Cartography I | 3sh |
| GE230 | Cultural Geography | 3sh |
| GE231 | Economic Geography | 3sh |
| GE241 | Physical Geography | 3sh |
| GE411 | History of Geography | 3sh |
| GE412 | Research Seminar | 3sh |

**Controlled elective:**
One course from GE251-257 3sh

**Track Courses: Five of the following:**

| | | |
|---|---|---|
| GE314 | Map and Photograph Interpretation | 3sh |
| GE316 | Introduction to Geographic Information Systems | 3sh |
| GE340 | Geography of Fresh Water Resources | 3sh |
| GE341 | Climatology | 3sh |
| GE342 | Physiography | 3sh |
| GE415 | Remote Sensing | 3sh |
| GE440 | Conservation: Environmental Analysis | 3sh |

**Free Electives:** **30-34**

**Total Degree Requirements:** **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

## Bachelor of Science—Regional Planning/GIS and Cartographer Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **54-58**
**Mathematics:** MA121 or 217
**Liberal Studies electives:** CO/IM/BE101 recommended, no courses with RP prefix

**College:**
Foreign Language Intermediate Level (1) **0-6**

**Major:** **39**
**Required courses in Planning:**

| | | |
|---|---|---|
| RP213 | Cartography I | 3sh |
| RP316 | Introduction to Geographic Information Systems | 3sh |
| RP350 | Introduction to Planning | 3sh |
| RP352 | Planning Methods | 3sh |
| RP354 | Planning Design | 3sh |
| RP412 | Research Seminar | 3sh |
| RP458 | Land Use Law | 3sh |
| RP464 | Land Use Policy | 3sh |
| RP468 | Planning Theory | 3sh |

**Track Courses:**

| | | |
|---|---|---|
| RP313 | Cartography II | 3sh |
| RP314 | Map and Photograph Interpretation | 3sh |
| RP415 | Remote Sensing | 3sh |
| RP417 | GIS Applications Development | 3sh |

**Other Requirements:**
Internship (RP493) strongly recommended **3-12**

**Free Electives:** **27-31**

**Total Degree Requirements:** **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

## Bachelor of Science—Regional Planning/Economic Developer Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **54-58**
**Mathematics:** MA121 or 217
**Social Sciences:** EC121
**Liberal Studies electives:** EC122, no courses with RP prefix

**College:**
Foreign Language Intermediate Level (1) **0-6**

**Major:** **39**
**Required courses in Planning:**

| | | |
|---|---|---|
| RP213 | Cartography I | 3sh |
| RP316 | Introduction to Geographic Information Systems | 3sh |
| RP350 | Introduction to Planning | 3sh |
| RP352 | Planning Methods | 3sh |
| RP354 | Planning Design | 3sh |
| RP412 | Research Seminar | 3sh |
| RP458 | Land Use Law | 3sh |
| RP464 | Land Use Policy | 3sh |
| RP468 | Planning Theory | 3sh |

**Track Courses: Four of the following:**

| | | |
|---|---|---|
| GE231 | Economic Geography | 3sh |
| GE331 | Population Geography | 3sh |
| RP332 | Urban Geography | 3sh |
| RP333 | Trade and Transportation | 3sh |
| GE334 | Political Geography | 3sh |

**Other Requirements:**
Internship (RP493) strongly recommended **3-12**

**Free Electives:** **27-31**
EC383 Urban/Regional Economics recommended

**Total Degree Requirements:** **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

## Bachelor of Science—Regional Planning/Environmental Planner Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54-58
**Mathematics:** MA121 or 217
**Liberal Studies electives:** CO/IM/BE101 recommended, no courses with RP prefix

**College:**
Foreign Language Intermediate Level (1) 0-6

**Major:** 39
**Required courses in Planning:**

| | | |
|---|---|---|
| RP213 | Cartography I | 3sh |
| RP316 | Introduction to Geographic Information Systems | 3sh |
| RP350 | Introduction to Planning | 3sh |
| RP352 | Planning Methods | 3sh |
| RP354 | Planning Design | 3sh |
| RP412 | Research Seminar | 3sh |
| RP458 | Land Use Law | 3sh |
| RP464 | Land Use Policy | 3sh |
| RP468 | Planning Theory | 3sh |

**Track Courses: Four of the following:**

| | | |
|---|---|---|
| RP314 | Map and Photograph Interpretation | 3sh |
| GE340 | Geography of Fresh Water Resources | 3sh |
| GE341 | Climatology | 3sh |
| GE342 | Physiography | 3sh |
| RP415 | Remote Sensing | 3sh |
| GE440 | Conservation: Environmental Analysis | 3sh |

**Other Requirements:**
Internship (RP493) strongly recommended 3-12

**Free Electives:** 27-31

**Total Degree Requirements:** 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

## Bachelor of Science—Regional Planning/Town Manager Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54-58
**Mathematics:** MA121 or 217
**Social Science:** PS111 recommended
**Liberal Studies electives:** GE230, CO/IM/BE101 recommended, no courses with RP prefix

**College:**
Foreign Language Intermediate Level (1) 0-6

**Major:** 39
**Required courses in Planning:**

| | | |
|---|---|---|
| RP213 | Cartography I | 3sh |
| RP316 | Introduction to Geographic Information Systems | 3sh |
| RP350 | Introduction to Planning | 3sh |
| RP352 | Planning Methods | 3sh |
| RP354 | Planning Design | 3sh |
| RP412 | Research Seminar | 3sh |
| RP458 | Land Use Law | 3sh |
| RP464 | Land Use Policy | 3sh |
| RP468 | Planning Theory | 3sh |

**Track Courses:**

| | | |
|---|---|---|
| GE231 | Economic Geography | 3sh |
| RP332 | Urban Geography | 3sh |
| PS354/355 Metropolitan Problems/ Intergovernmental Relations | | 3sh |
| *or* | | 3sh |
| PS370/371 Introduction to Public Administration/ Issues in Public Administration | | 3sh |

**Other Requirements:**
Internship (RP493) strongly recommended 3-12

**Free Electives:** 27-31
PS251 State and Local Political Systems recommended

**Total Degree Requirements:** 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

## Bachelor of Science in Education—Social Science Education/Geography Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Social Science:** EC121, GE102, PC101
**Liberal Studies electives:** EC122, S0337, and one of the following AN271-274 (SO271-274)

**College:** 30
**Professional Education sequence: (1)**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| ED455 | Teaching of Social Science in Secondary Schools | 3sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurement | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 24
**Required courses:**

| | | |
|---|---|---|
| GE230 | Cultural Geography | 3sh |
| GE241 | Physical Geography | 3sh |

**Controlled electives:**
At least one course from each of the following three groups:
Environmental Geography: GE340, 341, 342, 440
Human Geography: GE231, 331, 332, 333, 334, 336, 337, 431
History, Tools, and Techniques: GE213, 314, 411, 412, 415
Two of the following regional geography courses:
GE 251. 252. 253. 254, 255, 256, 257
Geography Electives 3sh

**Social science distribution requirements:** 15-18
The following courses are required:

| | | |
|---|---|---|
| PS280 | Comparative Government I: Western Political Systems | 3sh |
| HI203 | United States History for Historians | 3sh |

**Plus one of the following options:** 9-12sh
1. 6 additional hours in one social science field (history recommended) and 3 semester hours in another.
2. 9-12 additional hours in one social science field (history recommended), sufficient to meet the requirements for a minor.

**Other Requirements:** 0

**Free Electives:** 0-14

**Total Degree Requirements:** 124

(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).

## Department of German

**Jacob U. Voelker, Chairperson; Brode, Ready, Sommer, Sullivan**

The Department of German offers three degree programs: the B.A. in German, the B.A. in German for International Trade, and the B.S. in Education in Secondary German Education.

While majoring in the German Department, students will acquire proficiency in all phases of the language and develop an understanding and appreciation of the history, culture, and literature of the German-speaking countries. They will also gain knowledge of the linguistic development of the language throughout the centuries. German majors may look forward to rewarding careers in teaching, government, journalism, foreign trade, tourism, business, and librarianship.

The degree program in German for International Trade provides an excellent way to combine language proficiency and cultural awareness in German with professional training in business. With this undergraduate background, students may enter M.B.A. degree programs and pursue careers in international business and trade. Study abroad for one or two semesters is strongly urged and is an integral part of the program. Qualified students may also choose to participate in internship programs with German-based corporations and financial institutions.

### College Language Requirements

Students in the departments of the College of Humanities and Social Sciences and in most departments of the College of Natural Sciences and Mathematics must pass the intermediate sequence of a foreign language (GM251 and GM252) or demonstrate by the CLEP exam in German that they have acquired the equivalent proficiency level. Students from the other colleges may elect to take two courses in German at the intermediate (III/IV) level toward fulfilling the requirement for Liberal Studies electives. Any student who chooses German can meet the requirement through enrollment in the traditional, three-credit courses or in the combined six-credit courses.

### Study Abroad

The Department of German encourages all students who study German at IUP to consider study abroad for one or two semesters. German majors are strongly urged to study two semesters or one academic year at a German university. To provide this opportunity at a relatively modest cost, the university has arranged an exchange of students between Duisburg University and IUP. By participating in this or other approved programs, students can earn from twelve to fourteen hours per semester. For further information regarding the cost and application procedures, contact the office of the dean of the college.

### Minor in German

Students completing eighteen credits beyond GM152 will be recognized as having minored in German. Nine of the twelve credits must be taken at the 300 level with only three credits from the conversation sequence, GM221, 222, 321, 322. This achievement will be noted on the student's transcript and thus provide more career flexibility.

### Bachelor of Arts—German

**Liberal Studies:** 53-55
As outlined in Liberal Studies section
with the following specifications:
**Liberal Studies electives:** no courses with GM prefix

**College:** 0
Foreign language (included in major)

**Major:** 36
**Required courses:**

| | | |
|---|---|---|
| GM221 | Conversation III | 2sh |
| GM222 | Conversation IV | 2sh |
| GM251 | German III | 3sh |
| GM252 | German IV (1) | 3sh |
| GM321 | Advanced Conversation I | 1sh |
| GM322 | Advanced Conversation II | 1sh |
| GM351 | Advanced German Language I | 3sh |
| GM352 | Advanced German Language II | 3sh |
| GM361 | Development of German Culture and Literature I | 3sh |
| GM362 | Development of German Culture and Literature II | 3sh |

**Controlled electives:**
Other GM electives (advanced levels) 12sh (2)

**Other Requirements:** 0

**Free Electives:** 33-35

**Total Degree Requirements:** 124

(1) GM253 or 254 may be substituted for GM252.
(2) Department recommends at least one additional literature course (GM363-371 and one linguistics course (GM410 or in Germany).

### Bachelor of Arts—German for International Trade

**Liberal Studies:** As outlined in Liberal Studies section 54-56
with the following specifications:
**Mathematics:** MA121
**Social Science:** EC121
**Liberal Studies electives:** MA214, no courses with GM prefix

**College:** 0
Foreign language (included in major)

**Major:** 36
**Required courses:**

| | | |
|---|---|---|
| GM221 | Conversation III | 2sh |
| GM222 | Conversation IV | 2sh |
| GM251 | German III | 3sh |
| GM252 | German IV | 3sh |
| GM253 | Intermediate Composition and Conversation | 3sh |
| GM254 | Business German | 3sh |
| GM321 | Advanced Conversation I | 1sh |
| GM322 | Advanced Conversation II | 1sh |
| GM351 | Advanced German Language I | 3sh |
| GM352 | Advanced German Language II | 3sh |
| GM361 | Development of German Culture and Literature I | 3sh |
| GM362 | Development of German Culture and Literature II | 3sh |

**Controlled electives:**
Two additional GM electives (advanced levels) 6sh (1)

**Other Requirements: Business sequence:** 33

| | | |
|---|---|---|
| BL235 | Introduction to Business Law | 3sh |
| AD321 | Business and Interpersonal Communications | 3sh |
| AG201 | Accounting Principles I | 3sh |
| AG202 | Accounting Principles II | 3sh |
| EC122 | Principles of Economics II | 3sh |
| QB215 | Business Statistics | 3sh |
| IM300 | Information Systems: Theory and Practice | 3sh |
| FI310 | Finance I | 3sh |
| MG311 | Human Behavior in Organizations | 3sh |
| MG360 | Management and Production Concepts | 3sh |
| MK320 | Principles of Marketing | 3sh |

**Free Electives:** 0-1

**Total Degree Requirements:** 124

(1) Most students earn additional language credits (usually 12-14) in semester study abroad.

### Bachelor of Science in Education—Secondary German Education (*)

**Liberal Studies:** As outlined in Liberal Studies section 53-55
with the following specifications:
**Social Science:** PC101
**Liberal Studies electives:** no courses with GM prefix

**College:** 30
**Professional Education sequence: (1)**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |

| | | |
|---|---|---|
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| ED453 | Teaching of Foreign Languages in the Elementary/Secondary Schools | 3sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurement | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 33

**Required courses:**

| | | |
|---|---|---|
| GM221 | Conversation III | 2sh |
| GM222 | Conversation IV | 2sh |
| GM251 | German III | 3sh |
| GM252 | German IV | 3sh (2) |
| GM321 | Advanced Conversation I | 1sh |
| GM322 | Advanced Conversation II | 1sh |
| GM351 | Advanced German Language I | 3sh |
| GM352 | Advanced German Language II | 3sh |
| GM361 | Development of German Culture and Literature I | 3sh |
| GM362 | Development of German Culture and Literature II | 3sh |

**Controlled electives:**
Other GM electives 9sh

**Other Requirements:** 0

**Free Electives:** 6-8

**Total Degree Requirements:** 124

(*) See requirements leading to teacher certification in the catalog section on Academic Policies. "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).
(2) GM253 may be substituted for or taken in addition to GM252.

## Department of History

**Neil B. Lehman, Chairperson; Bailey, Botelho, Cashdollar, Kadlubowski, Landon, Larner, Marcus, McDonough, Miller, Shissler, Smith, Vogel, Wagner, Wang, Whited, Wiley; and professors emeriti Cord, Gallanar, Gelbach, Goodrich, Hatfield, Mastro, Mervine, Moore, Oliver, Rife**

Programs in history are designed to give both those who major in history in the College of Humanities and Social Sciences and those who concentrate in history in the College of Education an opportunity to study in some depth the past story of peoples and their world. Degrees offered by the History Department are the Bachelor of Arts in History and the Bachelor of Science in Education with a major in Social Studies, concentrating in history. The first program is under the College of Humanities and Social Sciences, and the second is under the College of Education.

The history student will find that the program is excellent preparation for government service, for pre-law training, for broad business opportunities, for work in varied fields of journalism, for archival positions, and for teaching. Not only the story of the people of the United States but also that of other peoples is covered, in the belief that global historical understanding is essential for the future of civilization.

Requirements for the degree of Bachelor of Arts in History are 33 semester hours in history. Requirements for the degree of Bachelor of Science in Education with a major in Social Studies, concentrating on history, are a minimum of 27 semester hours in history within the 54 semester hours required for social science certification. The requirement for a minor in history is 15 semester hours of courses with an HI prefix. For majors in history programs, courses in history in Liberal Studies are applicable only if numbered 300 or higher. All programs should be planned with an advisor. Every major and concentrate in history will be advised by History Department staff members.

Admission to HI482 and 483, initiation in the local chapters of Phi Alpha Theta and Pi Gamma Mu, participation in study tours and study abroad programs, and other activities should be investigated by every history student. The department is committed to the ideal of a broad liberal arts education.

### Bachelor of Arts—History

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50-52
**Liberal Studies electives:** no courses with HI prefix
**Humanities-History:** Fulfilled by required courses in major

**College:** 0-6
Foreign Language Intermediate Level (1)

**Major:** 33

**Required courses:**

| | | |
|---|---|---|
| HI200 | Introduction to History | 3sh |
| HI201 | Western Civilization Before 1600 | 3sh (2) |
| HI202 | Western Civilization Since 1600 | 3sh (2) |
| HI203 | United States History for Historians | 3sh (2) |

**Controlled electives:**

| | | |
|---|---|---|
| HI480 | Senior Seminar (3) | 3sh |
| Non-Western HI course: Latin America, Africa, or Asia | | 3sh |
| Five additional history courses (4) | | 15sh |

**Other Requirements:** 0

**Free Electives:** 33-41

**Total Degree Requirements:** 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) For students who have taken HI195, 210, 212, or 214 prior to becoming History majors, this course may not be appropriate. Consult History advisor before scheduling.
(3) This requirement may be fulfilled by completing either the departmental honors program or graduate seminar with a concluding paper.
(4) Courses selected from 300 and 400 level offerings; no more than six credits from HI493 as major elective.

### Bachelor of Arts—History/Pre-law

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50-52
**Liberal Studies electives:** no courses with HI prefix
**Humanities-History:** Fulfilled by required courses in major

**College:** 0-6
Foreign Language Intermediate Level (1)

**Major:** 33

**Required courses:**

| | | |
|---|---|---|
| HI200 | Introduction to History | 3sh |
| HI201 | Western Civilization Before 1600 | 3sh (2) |
| HI202 | Western Civilization Since 1600 | 3sh (2) |
| HI203 | United States History for Historians | 3sh (2) |

**Controlled electives:**

| | | |
|---|---|---|
| HI480 | Senior Seminar (3) | 3sh |
| Non-Western HI course: Latin America, Africa, or Asia | | 3sh |
| Five additional history courses (4) | | 15sh |

**Other Requirements: Pre-law Interdisciplinary Minor** 3-21
Seven courses, including at least one from each of six areas:
**Business:** AG201, AG202, BL235
**Criminology:** CR210, 260, 357
**Economics:** EC121, 122, 332
**English:** EN212, 220, 310
**Philosophy:** PH101, 222, 450
**Political Science:** PS358, 359, 361

**Free Electives:** 12-32

**Total Degree Requirements:** 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) For students who have taken HI195, 210, 212, or 214 prior to becoming History majors, this course may not be appropriate. Consult History advisor before scheduling.

(3) This requirement may be fulfilled by completing either the departmental honors program or graduate seminar with a concluding paper.
(4) Courses selected from 300 and 400 level offerings; no more than six credits from HI493 as major elective.

### Bachelor of Science in Education—Social Science Education/History Track (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **51-52**
**Humanities-History:** Fulfilled by required courses in major
**Social Science:** EC 121, PC101, and AN110
**Liberal Studies electives:** EC122, GE230, and either SO337 or 362; no courses with HI prefix

**College:** **30**

**Professional Education sequence: (1)**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching and Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching and Clinical Experience II | 1sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| ED455 | Teaching of Social Science in Secondary Schools | 3sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major: (2)** **27**

**Required History courses:**

| | | |
|---|---|---|
| HI200 | Introduction to History | 3sh |
| HI201 | Western Civilization Before 1600 | 3sh (3) |
| HI202 | Western Civilization Since 1600 | 3sh (3) |
| HI203 | United States History for Historians | 3sh (3) |
| HI480 | Senior Seminar in History | 3sh |

**Controlled History elective:**
One course from the fields of Middle East, Africa, Asia, or Latin America at the 300 level or higher 3sh
History electives:
Three history courses at the 300 level or higher, one to be from United States history 9sh

**Required Social Science distribution:** **9-12**

| | | |
|---|---|---|
| GEXXX | 200-level or higher Geography course | 3sh |
| PS111 | American Politics | 3sh |
| PS280 | Comparative Government I: Western Political Systems *or* | 3sh |
| PS285 | Comparative Government II: Non-Western Political Systems | 3sh |
| SO231 | Contemporary Social Problems | 3sh (4) |

**Free Electives:** **3-7**

**Total Degree Requirements:** **124**

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).
(2) Students entering secondary social studies education must present the following in order to gain admission:
  a. A 2.75 QPA with grades of C or better in history and social science courses required for certification.
  b. A letter of admission to teacher certification from the College of Education.
(3) For students who have taken HI195, 210, 212, or 214 prior to becoming History majors, this course may not be appropriate. Consult History advisor before scheduling.
(4) SO231 required only if SO237 or 362 are not taken as Liberal Studies electives.

## Department of Journalism

**Stanford G. Mukasa, Chairperson; Heilman, Jesick, Russell; and professors emeriti Furgiuele, Swauger, Truby**

Students interested in a career in news-editorial or public relations fields, with opportunities in such related areas as advertising, desktop publishing, computer-assisted reporting, and marketing, should enjoy this innovative, flexible program. The journalism major combines journalism elective courses, the student's choice of a variety of courses from other university departments, plus internships which provide on-the-job experience.

The IUP journalism major is flexible for the individual student, who decides, with an advisor, what directions his or her education will take for a mass communication career. The two sequences offered are News-Editorial and Public Relations.

A student wishing to enter the program becomes a journalism major in the College of Humanities and Social Sciences. Then, the student chooses an individual program within a large group of elective journalism courses, plus a much larger group of courses from various other areas of the university. A student who completes the major graduates with a B.A. in Journalism. Because journalism itself covers all areas of life, the journalism major covers many areas of study preparation. There are only four required courses, so the student is free to mold the program to his/her own special interests through both major and free electives.

The journalism major will use journalism courses to fulfill the minimum of 30 hours required for the major. All journalism majors must complete the intermediate sequence of a foreign language. This may be done in one of three ways: by examination, by earning credit in third and fourth levels of a foreign language, or by completing four levels of a new language. If the last procedure is used, the two beginning foreign language courses may be applied as free electives to the total number of credits needed for graduation.

The Department of Journalism offers an eighteen-credit minor designed to complement any major. Three three-credit courses are required: JN105 Journalism and Mass Media, JN102 Basic Journalistic Skills, and JN120 Journalistic Writing. The remaining nine credits may be taken from the following list of Journalism major courses: JN326, 338, 344, 347, 375, and designated Special Topics courses. Internship credits do not apply toward the eighteen-credit minor; however, a student in the minor program may take an internship and apply the credits as free electives.

### Course Sequence

The journalism faculty offers the following operational policy for its course sequence and prerequisites. The basic idea is for students to take Level I courses prior to Level II courses, etc. We ask that special attention be given to course prerequisites to avoid scheduling students without proper experience into courses. We do retain flexibility of waiving sequence and prerequisites in individual cases.

**Level I**

| | |
|---|---|
| JN102 | Basic Journalism Skills (required for all journalism majors and minors) |
| JN105 | Journalism and the Mass Media (required for all journalism majors and minors) |
| JN120 | Journalistic Writing (for journalism minors and nonmajors) |
| JN220 | Writing for the Print Media (required for all journalism majors) |

**Level II**

| | |
|---|---|
| JN243 | History of American Press |
| JN250 | Women and the Press |
| JN321 | Feature Writing |
| JN326 | Public Relations I |
| JN327 | Layout, Design, and Production |
| JN328 | News Reporting (required for all journalism majors) |
| JN337 | Editing |
| JN344 | Issues and Problems |
| JN345 | Sports Journalism |
| JN375 | World News Coverage |
| JN393 | Document Design I |

**Level III**

| | |
|---|---|
| JN347 | Journalism Law |
| JN348 | Editorial Page |
| JN423 | Management in Mass Communications |
| JN430 | Public Opinion and the News Media |
| JN446 | Research Methods in Journalism |
| JN450 | Advertising Writing |
| JN482 | Independent Study |
| JN490 | Public Relations II |
| JN491 | Presentation Making |
| JN492 | Problem Solving in PR |
| JN493 | Internship |
| JN494 | Document Design II |

## Bachelor of Arts—Journalism

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-55**
**Liberal Studies electives:** no courses with JN prefix

**College:** **0-6**
Foreign Language Intermediate Level (1)

**Major:** **30**
**Required courses:**

| | | |
|---|---|---|
| JN102 | Basic Journalistic Skills | 3sh |
| JN105 | Journalism and the Mass Media | 3sh |
| JN220 | Writing for the Print Media | 3sh |
| JN328 | News Reporting | 3sh |

**Controlled electives:**
Other JN courses 18sh (2)

**Other Requirements:** **0**
Department recommends a planned program of dual major, minor(s), or electives. (3) (4)

**Free Electives:** **33-41**

**Total Degree Requirements:** **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Maximum of six credits Internship applied to major.
(3) Students may take no more than 15sh outside the College of Humanities and Social Sciences without prior approval of advisor.
(4) Majors in the public relations sequence should make every effort to schedule MK320, MK433, and AD321.

## Minor—Journalism 18 (1)

**Required courses:**

| | | |
|---|---|---|
| JN102 | Basic Journalistic Skills | 3sh (2) |
| JN105 | Journalism and the Mass Media | 3sh (2) |
| JN120 | Journalistic Writing | 3sh (2) |

**Three controlled electives from following list:** 9sh
JN243, 326, 338, 344, 347, 375, 481

(1) Internship credits do not apply toward the eighteen-credit minor; however, a student in the minor program may take an internship and apply the credits as free electives.
(2) The above three courses are to be taken in sequence.

# Department of Philosophy and Religious Studies

**Albert E. Bouffard, Chairperson; Begres, Boone, Caraway, Chan, Ferrara, Gibson, Lin, Mlecko, Montgomery, Schaub, Smith, Yirenkyi; and professors emeriti Hermann, Kannwisher**

The Philosophy program's Liberal Studies courses are all introductory in nature; none of them presupposes any philosophical background. The student may choose from the following: PH101 Informal Logic, PH120 Introduction to Philosophy, PH221 Introduction to Symbolic Logic, PH222 Ethics, PH223 Philosophy of Art.

### Pre-Law Program

The Department of Philosophy and Religious Studies participates in the University Pre-Law Minor Program whereby a student majors in one of several academic disciplines including philosophy and also meets the pre-law minor requirements. Students interested in the philosophy major/pre-law minor should consult the departmental pre-law advisor. Philosophy courses included in the pre-law minor program are as follows: PH101 Informal Logic, PH222 Ethics, and PH450 Philosophy of Law.

## Bachelor of Arts—Philosophy

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-55**
**Liberal Studies electives:** no courses with PH prefix

**College:** **0-6**
Foreign Language Intermediate Level (1)

**Major:** **30**
**Required courses:**

| | | |
|---|---|---|
| PH221 | Symbolic Logic I | 3sh |
| PH222 | Ethics | 3sh |
| PH324 | History of Philosophy I: Ancient and Medieval | 3sh |
| PH325 | History of Philosophy II: Renaissance and Modern | 3sh |
| PH420 | Metaphysics | 3sh |
| PH421 | Theory of Knowledge | 3sh |

**Controlled electives:**
Four other PH courses (with restrictions) (2) (3) 12sh

**Other Requirements:** **0**

**Free Electives:** **33-41**

**Total Degree Requirements:** **124**

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) No more than three 100-200 level courses may be counted toward the major. Only PH courses may be counted toward the major. Unless otherwise indicated in the Course Descriptions, all 300-400 level courses require junior or senior standing or permission of the instructor. This prerequisite applies both to Philosophy majors and to majors in any other discipline.
(3) No more than nine non-classwork credits may be counted toward the major. Non-classwork credits include independent study, independent honors project, and internship in philosophy.

## Bachelor of Arts—Philosophy/Pre-law

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53-55**
**Liberal Studies electives:** no courses with PH prefix

**College:** **0-6**
Foreign Language Intermediate Level (1)

**Major:** **30**
**Required courses:**

| | | |
|---|---|---|
| PH1101 | Informal Logic: Methods of Critical Thinking (or PH221 Symbolic Logic I) | 3sh |
| PH1222 | Ethics | 3sh |
| PH1324 | History of Philosophy I: Ancient and Medieval | 3sh |

| | | |
|---|---|---|
| PH325 | History of Philosophy II: Renaissance and Modern | 3sh |
| PH420 | Metaphysics | 3sh |
| PH421 | Theory of Knowledge | 3sh |

**Controlled electives:**
Four other PH courses (with restrictions) (2) (3) 12sh

**Other Requirements: Pre-law Interdisciplinary Sequence** 6-21
Seven courses, including at least one from each of six areas:
**Business:** AG201, AG202, BL235
**Criminology:** CR201, 260, 357
**Economics:** EC121, 122, 332
**English:** EN212, 220, 310
**History:** HI320, 321, 346
**Political Science:** PS358, 359, 361

**Free Electives:** 12-29

**Total Degree Requirements:** 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) No more than three 100-200 level courses may be counted toward the major. Only PH courses may be counted toward the major. Unless otherwise indicated in the Course Descriptions, all 300-400 level courses require junior or senior standing or permission of the instructor. This prerequisite applies both to Philosophy majors and to majors in any other discipline.
(3) No more than nine non-classwork credits may be counted toward the major. Non-classwork credits include independent study, independent honors project. and internship in philosophy.

## Religious Studies

The Program in Religious Studies is designed to provide a balanced, nonsectarian, cross-cultural approach leading to a better understanding of the phenomenon of religion in human experience. It emphasizes an interdisciplinary approach by a) requiring religion-related courses outside Religious Studies and by b) encouraging the minor or a double major, rather than a single major in Religious Studies.

The program is valuable for those planning careers in religious education, religious journalism, or religious broadcasting. The program also provides an excellent background for graduates planning to enter Catholic, Jewish, or Protestant seminaries. Additionally, Religious Studies is a good complement to majors in such fields as Anthropology, English, Fine Arts, History. International Studies, Music, Philosophy, Political Science, Psychology, and Sociology. Religious Studies is one significant way to integrate course studies within the university curriculum.

In addition to the 24 semester hours of Religious Studies courses in the major, 6 semester hours must be taken from a number of courses offered by other departments which complement those offered in Religious Studies. Opportunity for interdisciplinary and cross-cultural study is implicit in the study of religious themesCand is required in the Religious Studies Program at IUP. Revisions are pending in the Religious Studies program.

### Minor

The requirements for a Minor in Religious Studies are 15sh:

1. 12sh must be taken from the Religious Studies offerings, which include certain required courses (see below).
2. 3sh must be taken outside the Religious Studies offering but in "religion-related" courses.
3. No more than three non-classwork credits may count toward minor.

Consult advisor in Religious Studies for choices.

### Liberal Studies Offerings

The Religious Studies program's Liberal Studies courses are all introductory in nature; none presupposes any Religious Studies background. The student may choose from the following: RS100, 250, or 290.

### Bachelor of Arts—Religious Studies

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Liberal Studies electives:** no courses with RS prefix

**College:** 0-6
Foreign Language Intermediate Level (1)

**Major:** 30
**Controlled electives: (2)**

| | |
|---|---|
| One course from list A: RS100 or 110 | 3sh |
| One course from list B: RS210 or 250 | 3sh |
| One course from list C: RS370 or 375 | 3sh |
| One course from list D: RS380, 410, or 440 | 3sh |
| Four additional RS courses (3) | 12sh |
| Two courses from religion-related courses (3) | 6sh |

**Other Requirements:** 0

**Free Electives:** 33-41

**Total Degree Requirements:** 124

(1) Intermediate-level Foreign Language may be included in the Liberal Studies electives.
(2) Other courses may be approved in consultation with advisor.
(3) Consult Religious Studies advisor.

### Minor—Religious Studies 15

| | |
|---|---|
| RS100 or 110 | 3sh |
| RS370 or 375 | 3sh |
| RS380 or 410 or 440 | 3sh |
| Elective in Religious Studies (1) | 3sh |
| Religion-related course (1) | 3sh |

(1) Consult Religious Studies advisor.

## Department of Political Science

**David D. Chambers, Chairperson; Bahgat, Dejene, Kuffner-Hirt, Jackson, Keene, Palmer, Platt, Sitton; and professors emeriti Chaszar, Lee, Smith**

Political scientists focus upon political systems, including the effect of environment on the system, inputs, the decision-making agencies which render binding public policies, and system outputs. Approaches to the study of government and politics include the normative approach, in which philosophical attention centers on values by asking the question "What ought to be?" and the behavioral approach, in which an attempt is made to develop verifiable theories through scientific methods by asking the questions "How" and "Why?"

Students majoring in political science have employment opportunities in federal, state, and local governments and with private civic groups, interest groups, and political groups. Students who go on to graduate work find appointments at higher levels and in college teaching. Students graduating in political science, as in any of the social sciences, are in demand by employers in business and industry. Students completing the Political Science Internship Program have experienced considerable success in finding employment upon graduation. The political science major is also especially suitable for the pre-law student.

Degrees offered by the Political Science Department are the Bachelor of Arts in Political Science, in Government and Public Service, and in Political Science Pre-Law. An interdisciplinary major and a minor in International Studies are sponsored by the Political Science Department. The department also offers a minor in political science.

## Bachelor of Arts—Political Science

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: — 53-55
**Social Science:** PS111
**Liberal Studies electives:** no courses with PS prefix

**College:** — 0-6
Foreign Language Intermediate Level (1)

**Major:** — 33
**Required courses:**

| | | |
|---|---|---|
| PS101 | World Politics | 3sh (2) |
| PS111 | American Politics | *sh (3) |

**Controlled electives:** 30sh
At least one course in three of first four areas:
**American Studies:** PS251, 300, 346, 350, 351, 353, 354, 355, 356, 357, 358, 359
**Political Theory:** PS360, 361, 362
**Public Policy and Administration:** PS250, 370, 371, 444
**International Studies:** PS280, 282, 283, 285, 320, 321, 380, 382, 383, 384, 385, 386, 387, 388, 389 (4)
**General Political Science:** PS300 (strongly recommended), PS377, 480, 481, 482, 485, 493

**Other Requirements:** — 15-27
Second major, minor, or concentration as approved by advisor with maximum of 15 credits outside College of Humanities and Social Sciences unless specifically approved

**Free Electives:** — 3-23

**Total Degree Requirements:** — 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) PS101 satisfies non-Western requirement.
(3) Credit for PS111 is counted in the Liberal Studies requirements.
(4) PS280 and/or PS285 recommended as prerequisite to PS380 through PS389.

## Bachelor of Arts—Political Science/Pre-Law

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: — 53-55
**Social Science:** PS111
**Liberal Studies electives:** no courses with PS prefix

**College:** — 0-6
Foreign Language Intermediate Level (1)

**Major:** — 33
**Required courses:**

| | | |
|---|---|---|
| PS101 | World Politics | 3sh (2) |
| PS111 | American Politics | *sh (3) |

**Controlled electives:** 30sh
At least one course in three of first four areas:
**American Studies:** PS251, 300, 346, 350, 351, 353, 354, 355, 356, 357, 358, 359
**Political Theory:** PS360, 361, 362
**Public Policy and Administration:** PS250, 370, 371, 444
**International Studies:** PS280, 282, 283, 285, 320, 321, 380, 382, 383, 384, 385, 386, 387, 388, 389 (4)
**General Political Science:** PS300 (strongly recommended), PS377, 480, 481, 482, 485, 493

**Other Requirements: Pre-law interdisciplinary minor** — 15-21
Seven courses, including at least one from each of six areas:
**Business:** AC201, AG202, BI235
**Criminology:** CR210, 260, 357
**Economics:** EC121, 122, 332
**English:** EN212, 220, 310
**History:** HI320, 321, 346
**Philosophy:** PH101, 222, 450

**Free Electives:** — 12-26

**Total Degree Requirements:** — 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) PS101 satisfies non-Western requirement.
(3) Credit for PS111 is counted in the Liberal Studies requirements.
(4) PS280 and/or PS285 recommended as prerequisite to PS380 through PS389.

## Bachelor of Arts—Government and Public Service

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: — 53-55
**Mathematics:** MA217
**Social Science:** EC121, PC101, SO151
**Liberal Studies electives:** CO101, no courses with PS prefix

**College:** — 0-6
Foreign Language Intermediate Level (1)

**Major:** — 39
**Required courses:**

| | | |
|---|---|---|
| PS111 | American Politics | 3sh |
| PS250 | Public Policy | 3sh |
| PS251 | State and Local Political Systems | 3sh |
| PS300 | Research Methods in Political Science | 3sh |
| PS370 | Introduction to Public Administration | 3sh |
| PS371 | Issues in Public Administration | 3sh |
| PC330 | Social Psychology | 3sh |
| EC335 | Public Finance | 3sh (2) |
| EC336 | State and Local Finance | 3sh (2) |
| SO458 | Political Sociology | 3sh (3) |

**Controlled electives:** 9sh
Three courses from list: PS350, 351, 352, 353, 354, 355, 358, 377, 444, 481, 482, 485, 493

**Other Requirements:** — 21
One course from communications areas (English Journalism, Communications Media) as approved by advisor — 3sh
Interdisciplinary minor: Government Management, Personnel Administration, Financial Administration, Planning — 18sh

**Free Electives:** — 3-11

**Total Degree Requirements:** — 124

(1) Intermediate-level Foreign Language may be included in the Liberal Studies electives.
(2) Approved substitutes for EC335 and 336: EC283, 332, 333, 373.
(3) Approved substitutes for SO458: SO335, 345, 303.

## Bachelor of Arts—Political Science/International Studies

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: — 53-55
**Social Science:** PS111
**Liberal Studies electives:** no courses with PS prefix

**College:** — 0-6
Foreign Language Intermediate Level (1)

**Major:** — 33
**Required courses:**

| | | |
|---|---|---|
| PS101 | World Politics | 3sh |
| PS111 | American Politics | *sh (2) |
| Interdisciplinary sequence | | 15sh (3) |
| Cultural specialization sequence | | 15sh (4) |

**Other Requirements:** — 0 (5)

**Free Electives:** — 30-38

**Total Degree Requirements:** — 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives. Only courses 300 level and beyond may count in the cultural specialization sequence.
(2) Credit for PS111 is included with Liberal Studies.

(3) The interdisciplinary sequence includes an introductory or comparative international course from each of five social science disciplines: anthropology, economics, geography, history, political science, and sociology. Selection depends on goal(s) of major and should be planned in consultation with the International Studies advisor.
(4) The specialization sequence focuses on one area or culture and three disciplines: economic systems, political systems, language, literature, history, geography. Currently, three specializations are offered: Latin America, the Far East, and Soviet Studies. Consult with advisor for planning course selection.
(5) Majors are strongly encouraged to take advantage of the study abroad opportunities available through IUP department programs and exchange opportunities available through the Center for International Studies.

### Minor—Political Science 15

**Required courses:**

| | | |
|---|---|---|
| PS101 | World Politics | 3sh |
| PS111 | American Politics | 3sh |

**Controlled electives:**

| | |
|---|---|
| Three additional PS courses | 9sh |

### Minor—International Studies 18

**Required courses:**

| | | |
|---|---|---|
| PS101 | World Politics | 3sh |
| PS111 | American Politics | *sh (1) |

**Controlled electives:**

| | |
|---|---|
| Interdisciplinary sequence (see major) | 15sh |

(1) Credit counted with Liberal Studies Social Sciences.

## Department of Sociology

**Herbert M. Hunter, Chairperson; Ackerman, Chang, Darling, Gondolf, Grant, Heckert, Holtz, Nowak, Rawleigh, Reynolds, Sanderson, Snyder**

The Department of Sociology seeks to develop both the scientific and humanistic foundations of sociology, to educate the wider community as to the significance of sociological knowledge, to apply sociological knowledge to current social problems, and to advance the profession by promoting the welfare of individuals and society. The discipline of sociology focuses primarily on the analysis of modern industrial societies by examining their basic patterns of social organization, the various changes that occur within these patterns, and the impact of the patterns on individual thought and action. Students are prepared for employment in human service fields or for graduate study in sociology or related fields.

Students majoring in sociology may select one of three tracks: General Sociology, Clinical Sociology, and Applied Social Research. The general track attempts to broadly educate those students who may wish to pursue graduate training in sociology and make sociology a career and profession. Because of its flexibility, it is also appropriate for students who want to pursue double majors that would include such fields as psychology or criminology. The general track gives students the broadest possible training in sociology. Students graduating with majors in general sociology often find employment in business, industry, and government.

The clinical track in sociology seeks to help students understand the causes of many of the problems that plague modern societies, such as poverty, racial discrimination, substance abuse, and domestic violence. It is designed to provide students with the knowledge and skills necessary to become practitioners in various human services areas (e.g., juvenile delinquency, medical sociology, gerontology, and interpersonal dynamics and family sociology).

The applied social research track emphasizes the development of research and assessment skills in students. Such skills are important in carrying out program assessments, needs assessments, program development, and other activities that focus on gathering, analyzing, and interpreting data important for policymakers.

The department also prepares teachers for secondary school social studies with a concentration in sociology. The program leads to the degree Bachelor of Science in Education. With its emphasis on patterns of social organization in modern industrialized societies, sociology provides a solid foundation for teaching social science at the secondary level. Minors are available in sociology and in applied social research.

### Bachelor of Arts—Sociology/General Sociology Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Mathematics:** MA217 recommended
**Social Science:** SO151
**Liberal Studies electives:** no courses with SO prefix

**College:** 0-6
Foreign Language Intermediate Level (1)

**Major:** 27
**Required courses:**

| | | |
|---|---|---|
| SO151 | Principles of Sociology | *sh |
| SO320 | Sociological Theory | 3sh |
| SO380 | Social Research Methods | 3sh |

**One of the following courses:**

| | | |
|---|---|---|
| SO361 | Social Stratification | 3sh |
| SO362 | Racial and Ethnic Minorities | 3sh |
| SO363 | Sociology of Sex and Gender | 3sh |

At least one different course from four of the following substantive areas: 12sh
**Social Inequality and Social Change:** SO303, 337, 361, 362, 363, 448, 458
**Deviance and Social Problems:** SO231, 333, 335, 427, 428
**Individual and Society:** SO251, 345, 357
**Social Organization and Institutions:** SO286, 336, 339, 340, 341, 342, 348, 352, 421, 458
**Comparative Sociology:** SO233, 271, 272, 273, 286, 303, 314, 337, 342

**Free Sociology Electives:** 6

**Other Requirements:** 0

**Free Electives:** 36-44

**Total Degree Requirements:** 124

(*) Credit counted in Liberal Studies, not in the major.
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

### Bachelor of Arts—Sociology/Clinical Sociology Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Mathematics:** MA217 recommended
**Social Science:** SO151 required, AN110 and PC101 recommended
**Liberal Studies electives:** no courses with SO prefix

**College:** 0-6
Foreign Language Intermediate Level (1)

**Major:** 42
**Required courses:**

| | | |
|---|---|---|
| SO151 | Principles of Sociology | *sh |
| SO301 | Clinical Sociological Theory | 3sh |
| SO302 | Clinical Sociological Practice | 3sh |
| SO303 | Social and Cultural Change | 3sh |
| SO320 | Sociological Theory | 3sh |
| SO380 | Social Research Methods | 3sh |
| SO493 | Internship in Sociology | 12sh |

**Controlled electives:** One substantive area (2) 15sh (3)
**Medical Sociology:** AN444 or SO342, and 4 courses from list: AN222, 444, BI151 or 155, EC335, FN212, PC321, 378, SO231, 336, 342, 357, 459
**Gerontology:** PC378 or SO357, and 4 courses from list: AN444, EC335, GE360, PC312, 378,

SO231, 251, 336, 342, 352, 357
**Juvenile Delinquency:** CR451 or SO333, and 4 courses from list: CR102, 270, 370, 451, GE432, HI374, SO231, 333, 336, 339, 345, 361, 362
**Interpersonal and Family Sociology:** SO336 or 345, and 4 courses from list: HE218, 224, PC311, 321, 330, SO251, 335, 336, 339, 345, 361, 363, 427, 428
**Labor and Industry:** SO340 or 348, and 4 courses from list: EC330, 350, 371, 372, 373, HI373, LR426, 480, PC420, SO231, 303, 340, 348, 361, 458
**Community Development:** SO339, and 4 courses from list: AN271, 272, 314, EC336, 383, FN402, GE331, 332, 360, PS251, 354, SO231, 333, 336, 338, 339, 341, 363

| | |
|---|---|
| **Other Requirements:** | 0 |
| **Free Electives:** | 21-29 |
| **Total Degree Requirements:** | 124 |

(*) Credit counted in Liberal Studies, but not in the major.
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Students may create their own substantive area with the approval of the department chairperson.
(3) At least two courses in any substantive area must be SO (Sociology) courses.

## Bachelor of Arts—Sociology/Applied Social Research Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Mathematics:** MA217
**Social Science:** SO151 required, AN110 recommended
**Liberal Studies electives:** CO101, no courses with SO prefix

**College:** 0-6
Foreign Language Intermediate Level (1)

**Major:** 42
**Required courses:**

| | | |
|---|---|---|
| SO151 | Principles of Sociology | *sh |
| SO320 | Sociological Theory | 3sh |
| SO380 | Social Research Methods | 3sh |
| SO456 | Field Research Methods | 3sh |
| SO457 | Computer Use in Sociology | 3sh |
| SO458 | Political Sociology | 3sh |
| SO471 | Internship in Sociology | 12sh |

**Controlled electives:** One substantive area (2) 15sh (3)
**Medical Sociology:** AN444 or SO342, and 4 courses from list: AN222, 444, BI151 or 155, EC335, FN212, GE360, PC321, 378, SO231, 335, 336, 342, 357, 459
**Gerontology:** PC378 or SO357, and 4 courses from list: AN444, EC335, 360, GE360, PC312, 378, SO231, 251, 336, 342, 352, 357
**Juvenile Delinquency:** CR451 or SO333, and 4 courses from list: CR102, 270, 361, 370, 451, GE432, HI374, SO231, 333, 336, 339, 345, 361, 362
**Interpersonal and Family Sociology:** SO335 or 345, and 4 courses from list: AN319, HE218, 224, PC311, 321, 330, SO251, 335, 336, 337, 339, 345, 361, 362, 427, 428, 435
**Labor and Industry:** SO340 or 348, and 4 courses from list: EC330, 350, 371, 372, 373, HI373, LR426, 480, PC420, PS352, SO231, 303, 340, 348, 361, 458
**Community Development:** SO339, and 4 courses from list: AN271, 272, 314, EC336, 383, FN402, GE331, 332, 360, PS251, 354, SO231, 333, 336, 338, 339, 341, 363

| | |
|---|---|
| **Other Requirements:** | 0 |
| **Free Electives:** | 21-29 |
| **Total Degree Requirements:** | 124 |

(*) Credit counted in Liberal Studies, not in the major.
(1) Intermediate-level Foreign Language may be included in Liberal Studies elective.
(2) Students may create their own substantive area with the approval of the department chairperson.
(3) At least two courses in any substantive area must be SO (Sociology) courses.

## Bachelor of Science in Education—Social Sciences Education/Sociology Concentration (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Social Science:** PC101, SO151, EC121
**Liberal Studies electives:** EC122, GE230, PS346, no courses with SO prefix

**College:** 30
**Professional Education sequence: (1)**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| ED455 | Teaching of Social Science in Secondary Schools | 3sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 36
**Required Sociology or related courses:**

| | | |
|---|---|---|
| AN211 | Cultural Anthropology | 3sh |
| SO151 | Principles of Sociology | *sh (2) |
| SO231 | Contemporary Social Problems | 3sh |
| SO320 | Sociological Theory | 3sh |
| SO380 | Social Research Methods | 3sh |

**Controlled electives:**
One course recommended from each of the following 3 areas of Sociology: 3sh
**Social Structures and Processes:** SO336, 340, 341, 348, 352, 421, 458, 459
**Social Problems:** SO231, 251, 333, 335, 357, 362, 363, 427, 428
**Theory and Research:** AN317, 321; SO301, 456, 457

**History Distributional Requirements**
Any two History courses which focus on the U.S. 6sh
Any Non-Western or World History Course 3sh

**Required Social Science Distribution**
GE200 level or higher 3sh
PS280 or 285 3sh

| | |
|---|---|
| **Other Requirements:** | 0 |
| **Free Electives: (3)** | 3-5 |
| **Total Degree Requirements:** | 124 |

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).
(2) SO151 Principles of Sociology is counted as part of the 53-55sh Liberal Studies requirements.
(3) Students who do not pass a special education competency test must take EX300; this will reduce their free electives.

## Minor—Sociology 15

**Required course:**

| | | |
|---|---|---|
| SO151 | Principles of Sociology | 3sh |

**Controlled electives:**

| | |
|---|---|
| One course from list: SO231, 320, 380 | 3sh |
| Three additional courses in Sociology | 9sh |

### Minor—Applied Social Research 15-21

**Required courses:**

| | | |
|---|---|---|
| SO380 | Social Research Methods | 3sh |
| SO456 | Field Research Methods | 3sh |
| SO457 | Computer Use in Sociology | 3sh |
| SO458 | Political Sociology | 3sh |

**Controlled elective:**

| | |
|---|---|
| Any research course in College of Humanities and Social Sciences, as approved by department chairperson | 3sh |
| Optional internship: AN493 or SO493 | 6sh |

## Department of Spanish and Classical Languages

**Jose M. Carranza, Chairperson; Barton, Broad, Drescher, Foltz, Glisan, Hernandez, Mendizabal, Miltz, Smith, Spieker, Thornton, Young**

The Department of Spanish and Classical Languages offers a varied curriculum designed to provide not only basic language instruction in Spanish, Greek, and Latin but also the more advanced competencies needed by language specialists and students hoping to take advantage of an international study experience. For the undergraduate Spanish major, the department has three degree programs: the B.S. in Education, the B.A. in Spanish, and the B.A. in Spanish for International Trade. The latter degree program provides solid undergraduate degree training preparatory to an M.B.A. in International Management.

Students majoring in Spanish will acquire proficiency in all phases of the language and enter more deeply into the history, culture, and literature of Spanish-speaking countries. Spanish majors generally find employment in government work, librarianship, journalism, foreign trade, airlines, tourism, business, and teaching. Students choosing careers as secondary school teachers will find the close supervision and advanced methodology offered by the department a distinct asset.

### College Language Requirements

Students in the College of Natural Sciences and Mathematics and College of Humanities and Social Sciences, who must pass an intermediate-level language course requirement for graduation, may choose any one of the four languages offered: French, German, Latin, and Spanish. Those choosing the Spanish or Latin options will fulfill the requirement by successfully completing SP201 or SP211 or LA201. The student with no previous foreign language study will take SP101-102 or SP111 or LA101-102 as a prerequisite; the credits will not be applicable to any college or department requirements (except for students in HRIM who may fulfill their 6-hour language requirement with SP111 or 211 or with two 4-hour courses) but may be counted as general electives in the total required for graduation. Students in the other colleges may choose to take one of the languages offered (at the intermediate level) in fulfilling the requirements of Liberal Studies electives.

Students with previous Spanish study in high school will be placed into the appropriate course levels by means of a written departmental exam, administered prior to the beginning of the semester. In addition, as deemed necessary in individual cases, students may be required to take an oral proficiency test with one or more faculty members in the Spanish department. Each student's individual requirements and the judgment of the classroom instructors will also be considered in placement. No student judged to be a native speaker of Spanish will be allowed to enroll in any course below the 300 level.

### Spanish for Elementary Education

A student in Elementary Education may elect a concentration of 19 semester hours of Spanish, consisting of the following:

| | | |
|---|---|---|
| SP201 | or equivalent | 4sh |
| SP221 | Intermediate Spanish Conversation | 3sh |
| SP230 | Intermediate Spanish Composition | 3sh |
| SP260 | Introduction to Hispanic Literature | 3sh |
| SP321 | Advanced Spanish Conversation | 3sh |
| SP404 | Advanced Spanish Grammar | 3sh |

Elementary Education students wishing to prepare to teach in elementary programs where content teaching in Spanish is the objective should enroll in the Foreign Languages and International Studies for Elementary Teaching (FLISET) program described under the Department of Professional Studies in Education.

### Study Abroad and Internships

**Study Abroad:** The university has established study abroad centers in Spain, Mexico, and Costa Rica. The program in Valladolid, Spain, is a second-semester-only program, whereas the ones in Mexico and Costa Rica are summer programs. All majors are encouraged to participate in study abroad; nonmajors are also accepted into these programs. The 18 hours in Spain or 7 hours in Mexico, or 4 hours in Costa Rica are applicable to a major or a minor in Spanish. Students interested in more information should contact the Spanish department.

**Internships:** Internships in Spain, Mexico, and Costa Rica are available through the department. All internships take place during the summer and vary from six weeks to two months in duration. Internship is a credit-bearing course, SP493, and all interns are enrolled in the first session of summer school. Noncredit internships cannot be considered. Students enrolled in the Spanish for International Trade program are strongly urged to do an internship in order to gain credibility in the field of international business. Internships are available in banking, government, social work, communications, education, marketing, and many other fields. Arranging an internship abroad takes considerable long-range planning, and anyone interested should contact the Spanish Department at least three months in advance.

### Bachelor of Arts—Spanish

**Liberal Studies:** As outlined in the Liberal Studies section with the following specifications: 53-55
**Liberal Studies electives:** no courses with SP prefix

**College:**

| | |
|---|---|
| Foreign Language (included in major) | 0 |

**Major:** 37

**Required courses:**

| | | |
|---|---|---|
| SP201 | or equivalent | 4sh |
| SP221 | Intermediate Spanish Conversation | 3sh |
| SP230 | Intermediate Spanish Composition | 3sh |
| SP260 | Introduction to Hispanic Literature | 3sh |
| SP321 | Advanced Spanish Conversation | 3sh |
| SP340 | Hispanic Civilization Through the 19th Century | 3sh |
| SP342/344 | 20th-Century Spanish Civilization and Culture/20th-Century Spanish-American Civilization and Culture | 3sh |
| SP404 | Advanced Grammar | 3sh |

**Controlled electives:**

| | |
|---|---|
| At least two courses from those numbered 410-431 | 6sh |
| Any other six credits in courses 342 or above | 6sh |

**Other Requirements:** 0

**Free Electives:** 32-34

**Total Degree Requirements:** 124

## Bachelor of Arts—Spanish for International Trade

**Liberal Studies:** As outlined in Liberal Studies section with following specifications: 54-56
**Mathematics:** MA121
**Social Science:** EC121
**Liberal Studies electives:** GE252, MA214, CO/BE/IM101, no course with SP prefix

**College:** 0
Foreign Language (included in major)

**Major:** 34
**Required courses:**

| | | |
|---|---|---|
| SP201 | or equivalent | 4sh |
| SP222 | Intermediate Spanish Conversation-Business | 3sh |
| SP230 | Intermediate Spanish Composition | 3sh |
| SP260 | Introduction to Hispanic Literature | 3sh |
| SP321 | Advanced Spanish Conversation | 3sh |
| SP340 | Hispanic Civilization Through the 19th Century | 3sh |
| SP404 | Advanced Grammar | 3sh |
| SP342/344 | 20th-Century Spanish Civilization and Culture/20th-Century Spanish-American Civilization and Culture | 3sh |
| SP354 | Commercial Spanish | 3sh |

**Controlled electives:**
Other Spanish Electives 6sh

**Other Requirements: Business sequence** 36

| | | |
|---|---|---|
| AD321 | Business and Interpersonal Communications | 3sh |
| AG201 | Accounting Principles I | 3sh |
| AG202 | Accounting Principles II | 3sh |
| BL235 | Introduction to Business Law | 3sh |
| EC122 | Principles of Economics II | 3sh |
| FI310 | Finance I | 3sh |
| IM300 | Information Systems: Theory and Practice | 3sh |
| MG310 | Human Behavior in Organizations | 3sh |
| MG330 | Management and Production Concepts | 3sh |
| MG495 | Business Policy | 3sh |
| MK320 | Principles of Marketing | 3sh |
| QB215 | Business Statistics | 3sh |

**Free Electives:** 0

**Total Degree Requirements** 124-126

## Bachelor of Science in Education—Secondary Spanish Education (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55
**Social Science:** AN110, PC101
**Liberal Studies electives:** no courses with SP prefix

**College:** 34
**Professional Education sequence:**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-Student Teaching and Clinical Experiences I | 1sh |
| ED342 | Pre-Student Teaching and Clinical Experiences II | 1sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| ED453 | Teaching of Foreign Language in Secondary School | 3sh |
| ED499 | Multicultural/Multiethnic Education | 2sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| EX301 | Education of Students with Disabilities in Inclusive Secondary Settings | 2sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 34
**Required courses:**

| | | |
|---|---|---|
| SP201 | or equivalent | 4sh |
| SP221 | Intermediate Spanish Conversation | 3sh |
| SP230 | Intermediate Spanish Composition | 3sh |
| SP260 | Introduction to Hispanic Literature | 3sh |
| SP321 | Advanced Spanish Conversation | 3sh |
| SP340 | Hispanic Civilization Through the 19th Century | 3sh |
| SP342/344 | 20th-Century Spanish Civilization and Culture/20th-Century Spanish-American Civilization and Culture | 3sh |
| SP353 | Spanish Phonetics and Phonemics | 3sh |
| SP390 | Teaching of Elementary Content Through the Spanish Language | 3sh |
| SP404 | Advanced Spanish Grammar | 3sh |

**Controlled Electives:**
Any other three (3) credits from SP300 or above 3sh

**Free Electives:** 1-3

**Total Degree Requirements** 124

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

## Minor—Spanish 22

**Required courses:**

| | | |
|---|---|---|
| SP201 | or equivalent | 4sh |
| SP221 | Intermediate Spanish Conversation | 3sh |
| SP230 | Intermediate Spanish Composition | 3sh |
| SP260 | Introduction to Hispanic Literature | 3sh |
| SP321 | Advanced Spanish Conversation | 3sh |
| SP342/344 | 20th-Century Spanish Civilization and Culture/20th-Century Spanish-American Civilization and Culture | 3sh |

**Controlled electives:**
One course: SP340, 342, 344, 362, 364, 353 3sh

# The College of Natural Sciences and Mathematics

**John S. Eck**, Dean
**Aleksandra B. Kaniasty**, Assistant Dean
**Raymond P. Pavloski**, Dean's Associate

One of the characteristics of the twentieth century is the marked change in the relation of citizens to their environment. Space probes, orbiting satellites, and productive research on the structure and synthesis of living matter have brought to the forefront for reexamination such time-honored queries as, "What is the nature of the universe?" or "Can people control their natural environment?" or "How did life begin?" Scientifically found answers to these and other questions, coupled with proper application of this knowledge for humankind's betterment, must be a significant part of the goal of educated people everywhere.

The objectives of the College of Natural Sciences and Mathematics are to acquaint the student with the kinds of problems which lend themselves to possible solutions through the use of science; to introduce different scientific techniques through significant illustrative experiences; to give a sense of perspective in the development of science; and to develop an understanding of the basic community of all scientific disciplines.

## Degrees Offered

Applied Mathematics
Applied Physics
Biochemistry
Biology
Biology Education
Chemistry
Chemistry Education
Computer Science
Earth and Space Science Education
Economics/Mathematics
Environmental Geoscience
Environmental Health
General Science Education
Geology
Mathematics
Mathematics Education
Natural Science
Physics
Physics Education
Psychology

## Degrees

The departments of Biology, Chemistry, Computer Science, and Physics offer work leading to either a Bachelor of Science or a Bachelor of Arts degree, depending upon the specific course program pursued. The Bachelor of Science degree is awarded for successful work in the departments of Geoscience and Mathematics. The Bachelor of Arts degree is awarded by the Department of Psychology. A Bachelor of Science degree is also awarded in Natural Sciences.

Several departments in the College of Natural Sciences and Mathematics sponsor Master of Arts or Master of Science degrees in the university's Graduate School. The Department of Psychology offers the Doctor of Clinical Psychology degree. Information on these programs should be obtained from the Graduate School.

## Degree Requirements

In addition to the university's Liberal Studies requirements, all students seeking a baccalaureate degree in the College of Natural Sciences and Mathematics must complete the requirements for a major as established by the department through which they wish to specialize. Statements of these requirements and those for minoring in a specific field appear in the department sections that follow. A double major or minor may encompass a discipline outside as well as within the college but should be selected only with advisor approval. As a general principle, there is considerable latitude in course choice for Natural Sciences and Mathematics majors; for specifically required courses, substitution in any program must have the written approval of the student's department chairperson or the college dean.

## The Foreign Language Requirement

Unless otherwise indicated, each department adheres to the following foreign language requirement:

A candidate for a Bachelor of Arts or Bachelor of Science degree must demonstrate a proficiency in a foreign language equivalent to that attained upon completion of two years of college instruction in that language. This requirement may be met by one of the following:

a. successful completion of the intermediate level in a specific language
b. successful completion of an exemption or credit examination

Any foreign student, registered as such at IUP, whose acquired native language is other than English and who demonstrates an acceptable proficiency in English, is exempt from the foreign language requirement for a Natural Sciences and Mathematics degree if the department he/she is majoring in does not require a specific language not thus covered.

### Preprofessional Programs

The College of Natural Sciences and Mathematics offers programs for the preparation of students for acceptance by a professional school: pre-medical (including osteopathic medicine) and pre-veterinary medicine. In addition, the college offers a major in the Natural Sciences for those students whose goal is dentistry, pharmacy or pharmacology, optometry, podiatry, chiropractic medicine, or physical therapy. All programs are so designed that, should work at a professional school not ensue, the student may earn an IUP baccalaureate degree, provided he/she has been faithful to faculty advisement.

The preprofessional health programs in the College of Natural Sciences and Mathematics presuppose that the student has an excellent background in the high school sciences and mathematics and will prove to be an excellent college student. Students should identify their proposed field of study upon admission to IUP.

### Cooperative Programs

IUP has been fortunate to enter into cooperative agreements with a number of outstanding institutions to provide significant career opportunities to our students. These formal agreements provide for accelerated graduate or professional degree programs or carefully planned and coordinated undergraduate programming with the cooperating institution. Programs are intended to assure acceptance of properly qualified students by the cooperating professional schools. Additional information concerning the specific programs can be found under the appropriate academic department in this catalog.

### Primary Care Scholars Program

The Philadelphia College of Osteopathic Medicine (PCOM) has established the Primary Care Scholars Program with six Pennsylvania State System of Higher Education universities. The program will enable students who have demonstrated both academic excellence and a commitment to the practice of primary care in Pennsylvania to gain early admission to PCOM. Contact Dr. Allan Andrew for specific information regarding this program.

### Allegheny General Hospital Scholars Program

This program has been established to attract highly qualified students who live in the Pittsburgh area and southwestern Pennsylvania to enter the medical disciplines of family medicine, internal medicine, and general pediatrics. This is an integrated program for IUP, Allegheny General Hospital, and MCP Hahnemann School of Medicine of the Allegheny University of the Health Sciences. Contact Dr. Allan Andrew for specific information regarding this program.

### Chiropractic *(see Natural Science)*

The New York College of Chiropractic Medicine Program is designed to accelerate the professional training of IUP students in the field of chiropractic medicine.

### Engineering *(See Department of Physics)*

The program with Drexel University combines the opportunity for two years of study at IUP with the remaining three years of study as part of the Drexel plan of cooperative education. A student completing this program will receive a bachelor's degree in engineering from Drexel University.

The program with University of Pittsburgh allows the student to enroll at IUP for the first three years of college and conclude degree work by enrolling in an engineering program at the University of Pittsburgh for the last two years. The student will earn a B.S. degree in Natural Science from IUP and the appropriate engineering degree from the University of Pittsburgh; see the Natural Science section for IUP degree requirements.

### Family Medicine *(See Department of Biology)*

The program with Jefferson Medical College of Thomas Jefferson University increases the opportunities for IUP students to be admitted to Jefferson Medical College in the Family Medicine Program. The program is designed to provide physicians to rural communities in Pennsylvania where there is a physician shortage.

### Primary Care Partnership *(See Department of Biology)*

The program with Pennsylvania State University College of Medicine enables the college to identify students with primary care potential and provide these students with the opportunity to interact with primary care faculty at the Pennsylvania State University College of Medicine.

### Forestry and Environmental Studies *(See Department of Biology)*

The program with Duke University is designed to coordinate the education of students from IUP with the graduate programs in forestry and environmental management offered at Duke University in Durham, North Carolina.

### Podiatry *(See Natural Science)*

The Pennsylvania College of Podiatric Medicine program accelerates the professional training of IUP students in the field of podiatry.

### Optometry *(See Natural Science)*

The Pennsylvania College of Optometry program accelerates the professional training of IUP students in the field of optometry.

### Marine Science Consortium

College majors may be interested in the programs available through the Marine Science Consortium. The Marine Science Consortium was established in 1968 for the purpose of promoting teaching and research in the marine sciences. Participating institutions include IUP and thirteen other colleges and universities. Although no separate major in the Marine Sciences exists, elective courses may be taken and credited toward undergraduate curricula in Biology, Geology, Geography, and Earth Science. The Marine Science Consortium offers five three-week sessions during the summer at the NASA-Wallops Island Station, Virginia. Normally, several research cruises are offered each summer.

Students must register for credit and pay credit fees to a participating institution. Room and board fees are paid to the consortium. Applications for all summer sessions must be submitted to the institutional director by April 1. Students must be accepted by the consortium before registering at a participating institution. See section on Marine Science Consortium for a listing of courses. For brochure, summer bulletin, and application forms, contact Dr. Ray L. Winstead, Biology, or Dr. Darlene S. Richardson, Geoscience, who are the IUP directors and assist students in program planning.

### Internship Programs

Several departments in the College of Natural Sciences and Mathematics have established extensive internship programs under which students engage in an off-campus supervised work experience for credit.

For more information about specific internship programs, students should consult with the chairperson of the department in which the student is majoring. Students eligible for internships may receive federal or state funding.

## Department of Biology

**Robert S. Prezant, Chairperson; Alico, Andrew, Ash-Johnson, Ayeho, Bharathan, Browe, Butler, Charnego, Ciskowski, Dietrich, Ferrence, Forbes, Gendron, Hinrichsen, Hulse, Humphreys, Jack, Kesner, Linzey, Lord, Luciano, Nastase, Newell, Peard, Peterson, Pickering, Pistole, Simmons, Winstead; and professors emeriti Gallati, Liegey, Moore, Schrock**

Degrees offered by the Department of Biology are the Bachelor of Science in Biology, the Bachelor of Arts in Biology, the Bachelor of Science in Environmental Health, and the Bachelor of Science in Education with a Biology major. The first three degree programs are under the College of Natural Sciences and Mathematics, and the fourth is under the College of Education. The department also offers a Biology minor.

The program leading to a B.S. in Biology is designed to provide maximum depth in the sciences and mathematics with less elective opportunity. Students who plan to attend graduate school or professional schools, such as those in human or veterinary medicine, most often choose this program of studies.

Further, the B.S. in Biology automatically qualifies a student for a minor in chemistry and thus represents more than adequate preparation for

employment opportunities that require expertise in both biology and chemistry.

The program leading to the B.A. in Biology is designed to allow for greater elective choice. This freedom could be used to pursue interests in nonbiological areas, allowing for a more broadly based Liberal Arts education. Alternatively, the B.A. degree student would have the flexibility to pursue in depth (to minor in or perhaps even to double major in) a particular nonbiological discipline. Biology combined with other sciences such as Computer Science, Chemistry, Physics, Geoscience, Mathematics or Psychology, or non-sciences such as Art, English, Business, or a foreign language can make attractive packages for the student and for potential future employers.

### Environmental Health Program

The Environmental Health program is a preparation for employment in local, state, and federal agencies and industry as well as graduate school in a public health-related field. Between the junior and senior year, each student should serve an internship with a governmental agency or an industrial concern.

### B.S. in Secondary Biology Education

The Department of Biology, in conjunction with the College of Education, provides a program leading to the B.S. in Education with certification to teach biology. The program is committed to preparing teachers who possess a strong foundation in biology, a broad background in associated sciences, and an extensive preparation in pedagogy.

### Foreign Language Requirement

Biology majors must complete intermediate level or two semesters of foreign language starting at the highest level recommended by the freshman Pre-registration Placement Test in that language (may be included in Liberal Studies electives). This requirement can also be met by demonstrating proficiency in a foreign language equivalent to the intermediate level.

### Cooperative Programs

The Biology Department cooperates in programs with Jefferson Medical College, Duke University School of Forestry and Environmental Studies, Marine Science Consortium, Inc., and Pymatuning Laboratory of Ecology.

### Duke Cooperative College Program in Forestry and Environmental Studies

The Cooperative College program with the Duke University School of the Environment is designed to coordinate the undergraduate education of students at IUP with graduate programs in the areas of resources and environment offered at Duke. Undergraduate majors in one of the natural sciences, mathematics, economics, business, or political science are suited to the program. Preparation for the Duke program should include at least one year each of biology with work in botany, economics with a significant component of microeconomics, and mathematics which should include calculus, computer science, and statistics. Applicants to the Duke program who have completed courses in ecology, chemistry, geology, physics, and a foreign language or additional courses in biology, economics, and mathematics will be given preferential consideration. Students are accepted in either of two degree programs at Duke: the Master of Forestry (M.F.) or Master of Environmental Management (M.E.M.).

Students may be accepted into the Duke graduate program after three years of high-quality undergraduate study at IUP or upon completion of the baccalaureate. Students who qualify after three years will have completed most of the undergraduate degree requirements at IUP except for total hours. Courses at Duke will be applied to the bachelor's degree at IUP. Dr. Jerry L. Pickering, Department of Biology, is the faculty advisor at IUP and assists students in program planning.

### Jefferson Medical College-IUP Physician Shortage Area Program

A cooperative Family Medicine Physician Education Program has been established by IUP and Jefferson Medical College of Thomas Jefferson University in Philadelphia for the purpose of improving the distribution of physicians in Pennsylvania. The program is designed to increase the opportunities for young women and men to practice family medicine in the rural communities of Pennsylvania where there is a shortage of physicians.

The program at Jefferson Medical College will admit approximately four graduates of IUP and twenty graduates of other colleges each year. Students from IUP will be admitted only if properly qualified according to the admission standards and policies of Jefferson Medical College. Applications are reviewed by the Joint IUP-Jefferson Subcommittee and recommendations made to the Jefferson Committee on Admissions.

### Admission to Jefferson Medical College

A strong preparation in the sciences and mathematics basic to medical school studies is required. A variety of college course formats and combinations, including biology, general and organic chemistry, and physics are a minimum. Courses taken to meet the basic requirements should be rigorous and, in general, comparable to courses accepted for concentration in these disciplines. Courses taken should be supplemented by laboratory experiences. Students may take upper-level science courses out of educational interest or to fulfill the requirements of their major. Taking additional science courses that cover material taught within the medical school curriculum is not helpful to gain admission.

Breadth of education is expected. Pursuit of some discipline in depth is encouraged. A successful medical student must actively acquire, synthesize, apply, and communicate information. These are skills that can be developed through a great variety of academic disciplines. Studies in the humanities and the social and behavioral sciences and development of effective writing skills are strongly suggested. Additional requirements for admission can be found in "Information for Prospective Students," published by Jefferson Medical College.

Students who qualify for the Physician Shortage Area Program (PSAP) must certify their intentions to adhere to the following plan of education and practice: (a) complete the family medicine curriculum during their four years of medical education at Jefferson Medical College, including a six-week clerkship in a rural area; (b) complete a three-year family medicine residency; and (c) agree to practice family medicine in an underserved area. Preference will be given to Pennsylvania residents who are interested in this program, with highest priority given to those who actually live, at the time of application, in the underserved area in which they hope to practice. (Dr. Allan Andrew, pre-medical advisor in the Biology Department, will assist students in program planning.)

### Marine Science Consortium

Biology majors interested in marine biology are encouraged to investigate summer courses offered through the Marine Science Consortium at Wallops Island, Virginia, by contacting Dr. Ray Winstead in the Biology Department. Courses offered have included Marine Biology, Tropical Marine Ecology, Fish Biology, Marine Invertebrates, and many more. These courses count as biology electives.

### Pymatuning Laboratory of Ecology

Biology majors can expand their selection of course offerings by participating in a cooperative program with the University of Pittsburgh's Field Station at the Pymatuning Laboratory of Ecology located in northwestern Pennsylvania. These elective courses center on ecological and environmental topics, i.e., Ecology, Field Botany, Vertebrate Ecology, Aquatic Entomology, Behavioral Ecology, and Experimental Design. Application and registration for both summer sessions must be completed by April 1. Students register for credit and pay fees at IUP. Books, lab fee, and room and board are paid to the Pymatuning Laboratory of Ecology. Dr. Anthony J. Nastase is the faculty advisor for this cooperative program and assists students in program planning, application, and registration.

### Mentor Program and Biology Residence Floor

The Department of Biology offers a Peer Mentor Program that allows incoming students, new to IUP and new to Biology, to quickly gain an academic home. New students are assigned an upper-level Peer Mentor to help guide them through the curriculum, requirements, and programs within our department and college. A fall off-campus retreat is an important component of our Mentor Program, and students are expected to attend.

Gordon Hall, just behind Weyandt Hall (the home of the Department of Biology), has a single residence floor dedicated to Biology, Environmental Health, Biology Education, and Preprofessional (Pre-Med, Pre-Vet) students. Students with similar professional and academic interests can share life experiences by being part of this component of our academic community. Undecided or Natural Science students with interests in Biology may also apply to be on this floor.

### Degree Programs

In the programs of study that follow, no more than 6 semester hours total from internships, independent study, and special topics can be counted toward biology course requirements. Credits beyond six earned from these sources are counted as general electives. Note: Students changing into the majors of Biology, Biology Pre-Med, or Environmental Health are required to have a 2.5 QPA or permission of the chairperson. The program in secondary biology education requires a cumulative QPA of 2.75 for all majors.

## Bachelor of Arts—Biology

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **55-56**
**Mathematics:** MA121
**Natural Science:** CH111-112
**Liberal Studies electives:** no courses with BI prefix

**Major:** **32**
**Required courses:**

| | | |
|---|---|---|
| BI111 | Principles of Biology I | 4sh |
| BI112 | Principles of Biology II | 4sh |
| BI210 | Botany | 3sh |
| BI220 | General Zoology | 3sh |
| BI250 | Principles of Microbiology | 3sh |
| BI263 | Genetics | 3sh |

**Controlled electives:**
Biology electives (major courses only) 12sh (1)

**Other Requirements:** **8**
**Chemistry sequence:**

| | | |
|---|---|---|
| CH231 | Organic Chemistry I | 4sh |
| CH351 | Biochemistry (2) | 4sh |

Foreign Language Intermediate Level (3) 0-6sh

**Free Electives:** **29**

**Total Degree Requirements:** **124**

(1) No more than 6sh total from Independent Study. Special Topics Internship applies to major: excess applied as free electives.
(2) The two-semester (six-credit) sequence of BC301-302 can be substituted for CH351 to meet the biochemistry requirement.
(3) See Foreign Language requirement. Intermediate-level foreign language may be included in Liberal Studies electives. Introductory-level foreign language courses count as free electives.

## Bachelor of Science—Biology

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **56-57**
**Mathematics:** MA121
**Natural Science:** CH111-112
**Liberal Studies electives:** PY111 and either MA122 OR MA216. no courses with BI prefix

**Major:** **38**
**Required courses:**

| | | |
|---|---|---|
| BI111 | Principles of Biology I | 4sh |
| BI112 | Principles of Biology II | 4sh |
| BI210 | Botany | 3sh |
| BI220 | General Zoology | 3sh |
| BI250 | Principles of Microbiology | 3sh |
| BI263 | Genetics | 3sh |

**Controlled electives:**
Biology electives (major courses only) 18sh (1)

**Other Requirements:** **17**
**Chemistry sequence:**

| | | |
|---|---|---|
| CH231 | Organic Chemistry I | 4sh |
| CH232 | Organic Chemistry II (2) | 4sh |
| CH351 | Biochemistry (3) | 4sh |

**Physics sequence:**

| | | |
|---|---|---|
| PY121 | Physics I Lab | 1sh |
| PY112 | Physics II Lecture | 3sh |
| PY122 | Physics II Lab | 1sh |

Foreign Language Intermediate Level (4) 0-6sh

**Free Electives:** **13**

**Total Degree Requirements:** **124**

(1) No more than 6sh total from Independent Study, Special Topics, or Internship applies to major; excess applied as free electives.
(2) Students may substitute a third math course (MA122 or MA216) for CH232.
(3) The two-semester (six-credit) sequence of BC301-302 can be substituted for CH351 to meet the biochemistry requirement.
(4) See Foreign Language requirement. Intermediate-level foreign language may be included in Liberal Studies electives. Introductory-level foreign language courses count as free electives.

## Bachelor of Science in Education—Biology (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **54**
**Mathematics:** MA110 or 121
**Natural Science:** CH11-112
**Social Science:** PC101
**Liberal Studies electives:** PY111. no courses with BI prefix. one course must have a GS prefix from the Liberal Studies Natural Science, Option II, Nonlaboratory List.

**College:** **30**
**Professional Education Sequence: (1)**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED441 | Student Teaching (2) | 12sh |
| ED442 | School Law | 1sh |
| ED451 | Teaching Science in the Secondary Schools | 3sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** **30**
**Required courses:**

| | | |
|---|---|---|
| BI111 | Principles of Biology I | 4sh |
| BI112 | Principles of Biology II | 4sh |
| BI210 | Botany | 3sh |
| BI220 | General Zoology | 3sh |
| BI250 | Principles of Microbiology | 3sh |
| BI263 | Genetics | 3sh |
| BI480 | Biology Seminar | 1sh |

**Controlled electives:**
Biology electives: (major courses only) 9sh (3)

**Other Requirements:** **13**
**Chemistry sequence:**

| | | |
|---|---|---|
| CH231 | Organic Chemistry I | 4sh |
| CH351 | Biochemistry (4) | 4sh |

**Physics sequence:**

| | | |
|---|---|---|
| PY121 | Physics I Lab | 1sh |
| PY112 | Physics II Lecture | 3sh |
| PY122 | Physics II Lab | 1sh |

**Free Electives:** **0**

**(#)Total Degree Requirements:** **127**

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).
(2) Eligibility for student teaching and certification in secondary biology education requires a cumulative QPA of 2.75 and a grade of C or better in all biology courses.
(3) No more than 6sh from Independent Study (BI482). Special Topics (BI481), Internship (BI493) applies to major: excess applied as free electives
(4) The two-semester (six-credit) sequence of BC301-302 can be substituted for CH351 to meet the biochemistry requirement.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

## Bachelor of Science—Environmental Health

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **56**
**Mathematics:** MA121
**Natural Science:** CH111-112
**Social Science:** EC101
**Liberal Studies electives:** BE/CO/IM101, MA216, PY111

**Major:** **30**
**Required courses:**

| | | |
|---|---|---|
| BI111 | Principles of Biology I | 4sh |
| BI112 | Principles of Biology II | 4sh |
| BI210 | Botany | 3sh |
| BI220 | General Zoology | 3sh |
| BI241 | General Microbiology | 3sh |
| BI310 | Applied Entomology and Zoonoses | 3sh |
| BI321 | Environmental Protection I | 3sh |
| BI322 | Environmental Protection II | 3sh |
| BI480 | Biology Seminar | 1sh |

**Controlled electives:**
Biology electives (major courses only) 3sh (1)

**Other Requirements:** **31**
**Required courses:**

| | | |
|---|---|---|
| CH231 | Organic Chemistry I | 4sh |
| CH323 | Analytical Methods | 4sh |
| PS250 | Public Policy | 3sh |
| PY121 | Physics I Lab | 1sh |
| PY112 | Physics II Lecture | 3sh |
| PY122 | Physics II Lab | 1sh |
| SA101 | Introduction to Occupational Safety and Health | 3sh |
| SA301 | Health Hazard Identification | 3sh |

**Controlled Electives:**

| | | |
|---|---|---|
| BI498 | Biology Internship (1) or controlled electives (2) | 9sh |
| Foreign Language Intermediate Level (3) | | 0-6sh |

**Free Electives:** **7**

**Total Degree Requirements:** **124**

(1) No more than 6sh total from Independent Study, Special Topics, or Internship applies to major, excess applied as free electives. At least one writing-intensive course within the major (e.g., BI362 or SA462) must be taken to fulfill Liberal Studies requirements.
(2) The following courses count as controlled electives: BI362, BI463, BI476, CH232, GS121, GS122, GS331, SA402, SA461, SA462.
(3) See Foreign Language Requirement. Foreign Language courses are counted as free electives.

## Minor—Biology **17**

**Required courses:**

| | | |
|---|---|---|
| BI103-104 | General Biology I and II or | |
| BI111-112 | Principles of Biology I and II | 8sh |
| Additional BI major's courses | | 9sh (1) |

**Other Requirements:**
Must have permission of biology department chairperson

(1) With approval of department chairperson.

## Biochemistry Program

**William E. Dietrich, Jr., Program Coordinator; Ford, Harding, Southard, Biology and Chemistry faculties**

The B.S. in Biochemistry is a four-year degree curriculum offered as a cooperative program by the Biology and Chemistry departments.

The curriculum leading to a B.S. in Biochemistry begins with foundation courses in biology, chemistry, mathematics, and physics in the first two years. Specialization in biochemistry commences in the third year with courses in biochemistry, genetics, physical chemistry, Special Topics in Biochemistry, and Biochemistry Seminar.

A unique feature of this undergraduate program is that Biochemistry research is a requirement. After consultation with faculty, the students will define a problem and devise an experimental plan through library research. Laboratory research will be done under the direct supervision of a faculty member. Finally, the student will report on the results of the research in both written and oral forms.

The B.S. in Biochemistry Program is intended for those students whose interests lie in a most exciting field of modern science. Graduates of this program can expect to be qualified to enter graduate programs in biochemistry, biology, chemistry, and molecular biology, professional schools in the health sciences, and positions in industrial and government research laboratories and in industrial production facilities.

## Bachelor of Science—Biochemistry

**Liberal Studies:** As outlined in the Liberal Studies section with the following specifications: **57-58**
**Mathematics:** MA123
**Natural Science:** PY131/141-132/142
**Liberal Studies elective:** MA124, no courses with BC prefix; one course must be 200-level or higher.

**Major:**
**Required courses:**

| | | |
|---|---|---|
| BI111 | Principles of Biology I | 4sh |
| BI263 | Genetics | 3sh |
| BI250 | Principles of Microbiology | 3sh |
| BI401 | Laboratory Methods in Biology and Biotechnology | 3sh |
| BC301/311 | Biochemistry I and Lab | 4sh |
| BC302/312 | Biochemistry II and Lab | 4sh |
| BC480 | Biochemistry Seminar I | 1sh (1) |
| BC481 | Special Topics in Biochemistry | 3sh |
| BC482 | Independent Research in Biochemistry | 2sh |
| BC490 | Biochemistry Seminar II | 1sh (1) |
| CH113 | Concepts in Chemistry | 4sh |
| CH114 | Basic Inorganic Chemistry | 4sh |
| CH231 | Organic Chemistry I | 4sh |
| CH232 | Organic Chemistry II | 4sh |
| CH323 | Analytical Methods | 4sh |
| CH340 | Physical Chemistry for the Biological Sciences | 3sh |

**Controlled electives:** **6-7**
Advanced Biology course chosen from: BI331, 350, 352, 364, or 453 3sh
Either MA216 or CO110 3-4sh

**Other Requirements:**
Foreign Language Intermediate Level (2) **0-6**

**Free Electives:** **0-5**

**Total Degree Requirements:** **124**

(1) 1sh each semester of senior year.
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.

## Department of Chemistry

**Pothen Varughese, Chairperson; Asting, Ballas, Bravo, Christodouleas, Crumm, Eddy, Elcesser, Ford, Harding, Ko, Kupchella, Long, McKelvey, Patsiga, Southard, Sowa, Syty, Wood, Woolcock; and professors emeriti Bordas, Costa, Fazio, Scroxton, Tackett, Wunz, Zambotti**

Degrees offered by the Department of Chemistry are the Bachelor of Science in Chemistry, the Bachelor of Arts in Chemistry, and the Bachelor of Science in Education with a Chemistry major. The first two degree programs are under the College of Natural Sciences and Mathematics, and the third is under the College of Education. The department also offers a Chemistry minor.

The B.S. in Chemistry is a professional degree and is certified by the American Chemical Society. The student completing this major should be qualified to assume a position in industry or government as a chemist or to apply for admission to graduate school to pursue advanced studies leading to the M.S. or Ph.D. degree. The student considering going to a professional school who also wishes to complete this degree should elect appropriate courses as required by the professional school in addition to the courses required here. Those students who are particularly interested in biochemistry should elect a few selected biology courses.

The curriculum leading to the B.A. in Chemistry is designed to allow for the workable union of nonscience areas with chemistry in such a way as to retain the fundamental science and mathematics requirements needed for a career in chemistry. A careful selection of electives will qualify the student for entrance into many fields in which there is an acute need for educated people and, at the same time, satisfy the entrance requirements of various professional and graduate schools.

Some possible and useful combinations between chemistry and other disciplines would include chemistry-biology, chemistry-business administration, chemistry-computer science, chemistry-criminology, chemistry-government, chemistry-pre-dental, chemistry-pre-law, chemistry-safety science, chemistry-pre-medicine, and chemistry-English (technical writing). The student must arrange a practical sequence of non-chemistry courses in consort with his/her advisor and the department chairperson concerned. A student seeking a career in forensic science should major in chemistry. The department also offers pre-medical programs in both the B.S. and B.A. curricula. These programs prepare the student to satisfy the entrance requirements of medical schools.

The curriculum leading to the B.S. in Education with a Chemistry major is designed to prepare the student to teach chemistry at the secondary school level. Upon completion of the specified coursework and the requirements for teacher certification processes, the student is eligible for Pennsylvania certification by the Pennsylvania Department of Education.

### Bachelor of Arts—Chemistry

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **56-57**
**Mathematics:** MA121 or MA123
**Natural Science:** PY111/121-112/122 or PY131/141-132/142
**Liberal Studies electives:** MA122 OR MA124, no courses with CH prefix

**Major:** **29**
**Required courses:**

| | | |
|---|---|---|
| CH113 | Concepts in Chemistry | 4sh |
| CH114 | Basic Inorganic Chemistry | 4sh |
| CH231 | Organic Chemistry I | 4sh |
| CH232 | Organic Chemistry II | 4sh |
| CH321 | Quantitative Analysis | 4sh |
| CH322 | Instrumental Analysis | 4sh |
| CH341 | Physical Chemistry I | 4sh |
| CH343 | Physical Chemistry Laboratory I | 1sh |

**Other Requirements:** **15-21**

| | |
|---|---|
| Planned program in complementary field (advisor approval) with 6sh in 300/400 level courses (2) | 15sh (1) |
| Foreign Language Intermediate Level | 0-6sh |

**Free Electives:** **17-24**

**Total Degree Requirements:** **124**

(1) Recommended fields: Biology, Business, Computer Science, Criminology, Dietetics, Economics, English, Foreign Language, Geoscience, Mathematics, Safety Science, Physics, Political Science, Psychology.
(2) Chemistry Pre-Med program requires BI111, 112, 263, 331.
(3) Intermediate-level Foreign language may be included in Liberal Studies electives.

### Bachelor of Science—Chemistry

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **56-57**
**Mathematics:** MA123
**Natural Sciences:** PY131/141-132/142
**Liberal Studies electives:** MA124, no courses with CH prefix

**Major:** **44**
**Required courses:**

| | | |
|---|---|---|
| CH113 | Concepts in Chemistry | 4sh |
| CH114 | Basic Inorganic Chemistry | 4sh (1) |
| CH231 | Organic Chemistry I | 4sh |
| CH232 | Organic Chemistry II | 4sh |
| CH301 | Chemistry Seminar | 1sh |
| CH321 | Quantitative Analysis | 4sh |
| CH322 | Instrumental Analysis | 4sh |
| CH341 | Physical Chemistry I | 4sh |
| CH342 | Physical Chemistry II | 3sh |
| CH343 | Physical Chemistry Laboratory I | 1sh |
| CH344 | Physical Chemistry Laboratory II | 1sh |
| CH410 | Advanced Inorganic Chemistry Laboratory | 1sh |
| CH411 | Advanced Inorganic Chemistry | 3sh |

**Controlled electives:**

| | |
|---|---|
| Additional Chemistry electives from list: CH331, 335, 351, 376, 412, 421, 441, 498 | 6sh (2) |

**Other Requirements:** **7-14**

| | |
|---|---|
| Additional math: CO110 and one additional course from MA171, 227, 241, 342 | 7-8sh |
| Pre-Med program (3) | |
| Foreign Language Intermediate Level (4) | 0-6sh |

**Free Electives: (5)** **9-17**

**Total Degree Requirements:** **124**

(1) Those who took CH111 and 112 should take CH116 for ACS certified B.S.
(2) CH498 (2sh) required for American Chemical Society certification.
(3) Chemistry/Pre-Med program requires BI111, BI112, BI263, BI331, BI352, and CH351.
(4) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(5) Pre-Med requires Biology sequence 18sh.

### Bachelor of Science in Education—Chemistry (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **56-57**
**Mathematics:** MA121
**Natural Science:** PY111/121-112/122
**Social Science:** PC101
**Liberal Studies electives:** MA122, no courses with CH prefix

**College:** **30**
**Professional education sequence: (1)**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED421 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| ED451 | Teaching Science in the Secondary School | 3sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

| | | | |
|---|---|---|---|
| **Major:** | | | **33-35** |
| **Required courses:** | | | |
| CH113 | Concepts in Chemistry | 4sh | |
| CH114 | Basic Inorganic Chemistry | 4sh | |
| CH231 | Organic Chemistry I | 4sh | |
| CH232 | Organic Chemistry II | 4sh | |
| CH321 | Quantitative Analysis | 4sh | |
| CH322 | Instrumental Analysis | 4sh | |
| CH341 | Physical Chemistry I | 4sh | |
| CH343 | Physical Chemistry Laboratory I | 1sh | |
| CH498 | Problems in Chemistry | 1-2sh | |
| **Controlled electives:** | | | |
| One additional chemistry course from list: CH342, 351, 411 | | 3-4sh | |
| **Other Requirements:** | | | **4** |
| BI111 | Principles of Biology I | 4sh | |
| **Free Electives:** | | | **0-1** |
| **(#)Total Degree Requirements:** | | | **124-126** |

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, *"Admission to Teacher Education."*

(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).

(#) See advisory paragraph *"Timely Completion of Degree Requirements"* in catalog section on Requirements for Graduation.

## Minor—Chemistry 20

| | | |
|---|---|---|
| **Required courses:** | | |
| CH111 | General Chemistry I | 4sh |
| CH112 | General Chemistry II | 4sh |
| CH231 | Organic Chemistry I | 4sh |
| CH232 | Organic Chemistry II | 4sh |
| One chemistry elective from CH321, CH323, CH351 | | 4sh |

# Department of Computer Science

**William W. Oblitey, Chairperson; Buterbaugh, Cross, Cunningham, Grove, McKelvey, Micco, Shubra, Sweeney, Watts, Wolfe; and professor emeritus Tompkins**

Degrees offered in the Department of Computer Science are the Bachelor of Science and the Bachelor of Arts in Computer Science. The programs are designed primarily to prepare graduates for productive work in highly computer-oriented areas of business, government, and industry. In recent years, students graduating from the program have attained their first jobs in business applications, programming and systems analysis, computer software development, scientific and applied mathematical programming, and other computer-related areas and have gone to graduate school.

In a rapidly developing field such as Computer Science, it is important that the graduate's education be broad and fundamental so that new trends can more readily be followed. Our goal is to balance fundamentality and breadth with sufficient supervised practice so that our graduates are productive at the time they graduate but ready and willing to change with the field.

Most applied computer scientists work in cooperation with professionals trained in other areas and with managers. Hence, the ability to work and communicate with others of different educational backgrounds is an important characteristic. To that end, we encourage Computer Science majors to take a strong minor (or area concentration) in a second area of interest. Some students may wish to double major. Majors in other disciplines at IUP are also welcome to take Computer Science courses for which they are qualified or a Computer Science minor.

Students majoring in Computer Science should set their goals beyond simple programming and should be preparing

1. to program well, both in design and implementation phases, and document what they have programmed
2. to analyze real-world problems in preparation for program design and implementation
3. to manage activities that are strongly computer dependent
4. to improve the tools that programmers and systems analysts use, i.e., to develop
   a. better machine systems
   b. better software systems
   c. better languages for communicating with machines
   d. better methods for solving intractable problems
5. to teach about computers at college or high school level
6. to advance the fundamental theory of digital information processors.

## Bachelor of Arts—Computer Science

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **55-58**
**Mathematics:** MA123 (or MA121-122 or 127)
**Liberal Studies electives:** MA216 (or MA214 or MA217), no courses with CO prefix

| | | | |
|---|---|---|---|
| **Major:** | | | **35** |
| **Required courses:** | | | |
| CO105 | Fundamentals of Computer Science | 3sh | |
| CO110 | Problem Solving and Structured Programming | 3sh | |
| CO220 | Applied Computer Programming | 3sh | |
| CO300 | Assembly Language Programming | 3sh | |
| CO310 | Data Structures | 3sh | |
| CO315 | Large File Organization and Access | 3sh | |
| CO380 | Seminar on the Computer Profession | 1sh | |
| CO480 | Seminar on Technical Topics | 1sh | |
| **Controlled electives: Select 9sh (1)** | | | |
| CO250 | Introduction to Numerical Methods | 3sh | |
| CO319 | Software Engineering Concepts | 3sh | |
| CO320 | Software Engineering Practice | 3sh | |
| CO345 | Data Communications | 3sh | |
| CO355 | Computer Graphics | 3sh | |
| CO360 | IBM Job Control Language | 1sh | |
| CO362 | UNIX and C | 3sh | |
| CO481 | Special Topics in Computer Science (only sections approved for majors) | 1-4sh | |
| CO482 | Independent Study | 1-4sh | |
| CO493 | Internship in Computer Science | 12sh (2) | |
| **Upper Level Electives by Categories:** | | 6sh (3) | |
| **Computer Architecture:** CO410 | | | |
| **Theory of Languages:** CO419, 420, 424, 460 | | | |
| **Systems Programming:** CO430, 432 | | | |
| **Numerical Methods:** CO450 | | | |
| **Artificial Intelligence:** CO405 | | | |
| **Data Base Management:** CO441 | | | |
| **Other Requirements:** | | | **6-22** |
| **Additional Writing:** | | | |
| EN322 | Technical Writing | 3sh | |
| Foreign Language Intermediate Level | | 0-6sh (4) | |
| **Additional Mathematics:** | | 3-13sh (5) | |
| MA123 | Calculus I for Physics and Chemistry | | |
| (MA121 and 122 or MA127 may be substituted) | | | |
| MA216 | Probability and Statistics for Natural Sciences | | |
| (MA363 and 364, MA214 and 417, or MA217 and 417 may be substituted) | | | |
| MA219 | Discrete Mathematics | | |
| **Free Electives:** | | | **9-28** |
| **Total Degree Requirements:** | | | **124** |

(1) Select at least 9sh from the list of controlled electives and/or the list of upper-level electives. Note: Only 4sh of CO493 may be counted toward these 9sh.

(2) CO493 may be selected in either the second semester of the junior year or the first semester of the senior year. If CO493 is selected and approved, CO380 should be taken in the immediately preceding semester.

(3) Select at least two additional courses, from at least two different categories, from the list of upper-level electives.

(4) Foreign Language intermediate-level courses are counted as Liberal Studies electives.

(5) Any of the Mathematics options satisfy the Learning Skill requirement, and one course may be counted as a Liberal Studies elective. The three-credit minimum applies to students who take MA123 and 216. The thirteen-credit maximum applies to students who take the MA121-122 calculus option and the MA363-364 statistics option.

## Bachelor of Science—Computer Science/Applied Computer Science Track

| | | |
|---|---|---|
| **Liberal Studies:** As outlined in Liberal Studies section with the following specifications: | | 54-58 |
| **Mathematics:** MA123 (or MA121-122 or MA127) | | |
| **Liberal Studies electives:** MA216 (or MA214 or MA217), no courses with CO prefix | | |
| **Major:** | | 38 |
| **Required courses:** | | |
| CO105 | Fundamentals of Computer Science | 3sh |
| CO110 | Problem Solving and Structured Programming | 3sh |
| CO220 | Applied Computer Programming | 3sh |
| CO300 | Assembly Language Programming | 3sh |
| CO310 | Data Structures | 3sh |
| CO315 | Large File Organization and Access | 3sh |
| CO319 | Software Engineering Concepts | 3sh |
| CO380 | Seminar on the Computer Profession | 1sh |
| CO441 | Data Base Management | 3sh |
| CO480 | Seminar on Technical Topics | 1sh |
| **Select one of the following two courses:** | | |
| CO320 | Software Engineering Practice | 3sh (1) |
| CO493 | Internship in Computer Science | 12sh (2) |
| **Controlled electives: Select 6sh (3)** | | |
| CO250 | Introduction to Numerical Methods | 3sh |
| CO345 | Data Communications | 3sh |
| CO355 | Computer Graphics | 3sh |
| CO360 | IBM Job Control Language | 1sh |
| CO362 | UNIX and C | 3sh |
| CO481 | Special Topics in Computer Science (only sections approved for majors) | 1-4sh |
| CO482 | Independent Study | 1-4sh |
| Upper Level Electives by Categories: Select 3sh (4) | | |
| **Computer Architecture:** CO410 | | |
| **Theory of Languages:** CO419, 420, 424, 460 | | |
| **Systems Programming:** CO430, 432 | | |
| **Numerical Methods:** CO450 | | |
| **Artificial Intelligence:** CO405 | | |
| **Other Requirements:** | | 6-22 |
| **Additional Writing:** | | |
| EN322 | Technical Writing | 3sh |
| Foreign Language Intermediate Level | | 0-6sh (5) |
| **Additional Mathematics:** | | 3-13sh (6) |
| MA123 | Calculus I for Physics and Chemistry | |
| (MA121 and 122 or MA127 may be substituted) | | |
| MA216 | Probability and Statistics for Natural Sciences | |
| (MA363 and 364, MA214 and 417, or MA217 and 417 may be substituted) | | |
| MA219 | Discrete Mathematics | |
| **Complete a minor from one of the following areas:** | | 6-18 |
| a) From any department in the College of Natural Sciences and Mathematics | | 6-18sh |
| b) From designated Business courses | | 18sh |
| c) From designated Economics courses | | 15sh |
| d) From designated Geography courses | | 15sh |
| **Free Electives:** | | 0-20 |
| **Total Degree Requirements:** | | 124 |

(1) Credit for both CO320 and CO493 may be counted toward the degree, but only one will be counted toward the major requirements.
(2) CO493 may be selected in either the second semester of the junior year or the first semester of the senior year. If CO493 is selected and approved, CO380 may be taken in the immediately preceding semester.
(3) Select at least 6sh from the list of controlled electives and/or the list of upper-level electives.
(4) Select at least one additional course from the list of upper-level electives.
(5) Foreign Language intermediate-level courses are counted as Liberal Studies electives.
(6) Any of the Mathematics options satisfy the Learning Skill requirement, and one course may be counted as a Liberal Studies elective. The three-credit minimum applies to students who take MA123 and 216. The thirteen-credit maximum applies to students who take the MA121-122 calculus option and the MA363-364 statistics option.

## Bachelor of Science—Computer Science/Languages and Systems Track

| | | |
|---|---|---|
| **Liberal Studies:** As stated in Liberal Studies Requirements with the following specifications: | | 54-58 |
| **Mathematics:** MA123 or 127 | | |
| **Liberal Studies electives:** MA124, no course with CO prefix | | |
| **Major:** | | |
| **Required courses:** | | 41 |
| CO105 | Fundamentals of Computer Science | 3sh |
| CO110 | Problem Solving and Structured Programming | 3sh |
| CO220 | Applied Computer Programming | 3sh |
| CO300 | Assembly Language Programming | 3sh |
| CO310 | Data Structures | 3sh |
| CO315 | Large File Organization and Access | 3sh |
| CO319 | Software Engineering Concepts | 3sh |
| CO380 | Seminar on the Computer Profession | 1sh |
| CO410 | Processor Architecture and Microprogramming | 3sh |
| CO420 | Modern Programming Languages | 3sh |
| CO432 | Introduction to Operating Systems | 3sh |
| CO480 | Seminar on Technical Topics | 1sh |
| **Controlled electives: Select 9sh (1)** | | |
| CO250 | Introduction to Numerical Methods | 3sh |
| CO320 | Software Engineering Practice | 3sh (2) |
| CO345 | Data Communications | 3sh |
| CO355 | Computer Graphics | 3sh |
| CO360 | IBM Job Control Language | 1sh |
| CO362 | UNIX and C | 3sh |
| CO405 | Artificial Intelligence | 3sh |
| CO419 | Software Development with Ada | 3sh |
| CO424 | Compiler Construction | 3sh |
| CO430 | Introduction to Systems Programming | 3sh |
| CO441 | Data Base Management | 3sh |
| CO450 | Applied Numerical Methods | 3sh |
| CO460 | Theory of Computation | 3sh |
| CO481 | Special Topics in Computer Science (as approved for majors) | 1-4sh |
| CO482 | Independent Study | 1-4sh |
| CO493 | Internship in Computer Science | 12sh (3) |
| **Other Requirements:** | | 13-21 |
| **Additional writing:** | | |
| EN322 | Technical Writing | 3sh |
| Foreign Language Intermediate Level | | 0-6sh (4) |
| **Mathematics:** A minor in mathematics including the following courses | | 10-12sh (5) (6) |
| MA123 | Calculus I for Physics and Chemistry (127 may be substituted) | |
| MA124 | Calculus II for Physics and Chemistry (MA128 may be substituted) | |
| MA171 | Introduction to Linear Algebra | |
| MA216 | Probability and Statistics for Natural Sciences | |
| (MA363 and 364, MA214 and 417, or MA217 and 417 may be substituted) | | |
| MA219 | Discrete Mathematics | |
| **Free Electives:** | | 5-23 |
| **Total Degree Requirements:** | | 124 |

(1) Select at least 9sh from the list of controlled electives. Note: Only 4sh of CO493 may be counted toward these 9sh.
(2) Credit for both CO320 and CO493 may be counted toward the degree, but only one will be counted toward the major requirements.

(3) CO493 may be selected in either the second semester of the junior year or the first semester of the senior year. If CO493 is selected and approved, CO380 may be taken in the immediately preceding semester.
(4) Foreign Language intermediate-level courses are counted as Liberal Studies electives.
(5) Credit for MA123/127 and MA124/128 counted in Liberal Studies.
(6) Any of the Mathematics options satisfy the Learning Skill requirement, and one course may be counted as a Liberal Studies elective. The three-credit minimum applies to students who take MA123 and 216. The thirteen-credit maximum applies to students who take the MA121-122 calculus option and the MA363-364 statistics option.

### Minor—Computer Science 15

**Required courses:**
CO electives 15sh (1) (2)

(1) The minor in Computer Science consists of 15 semester hours of CO electives. At least 9 semester hours of the 15 must be from CO courses numbered higher than 200.
(2) CO101 is an appropriate entry course for minors or for students who wish to take only one course.
(3) See Computer Science minor advisor for suggestions.

## Department of Geoscience

**Frank W. Hall II, Chairperson; Cercone, Clark, Hovan, Park, Richardson, Sutton, Taylor; and professor emeritus Prince**

The Geoscience Department provides curricula in areas of natural science dealing with and related to the earth and its environment by offering courses in astronomy, geology, meteorology, and oceanography.

In addition to on-campus instruction, opportunities exist for summer coursework and research in geology and oceanography at the Marine Science Consortium located at Wallops Island, Virginia.

Degrees offered by the Department of Geoscience are the Bachelor of Science in Geology, the Bachelor of Science in Environmental Geoscience, and the Bachelor of Science in Education with a major in Earth and Space Science or with a major in General Science. The first two degree programs are under the College of Natural Sciences and Mathematics, and the last two are under the College of Education.

The B.S. degree in Geology is, in a sense, a dual-purpose degree program. Not only is it designed to graduate well-trained, competent geologists, able to compete for positions as professional geologists in the job market; it is also designed to provide the student with the necessary allied science and mathematics background to enable the good student to qualify for admission to the graduate school of his/her choice in Geology.

The B.S. degree in Environmental Geoscience offers the student a broad-based science background. In addition to a firm foundation in Geology-Geoscience courses, the student will also acquire a background in Biology and Chemistry. This will provide thorough training for the rapidly growing field of Environmental Geoscience, both for students who plan to pursue postgraduate training in this field and for those who plan to enter directly into jobs in federal and state agencies and private consulting firms.

The department recognizes as one of its functions the role of serving the field of public education by the preparation of qualified and certified teachers of earth and space science. Also, because of the interdisciplinary nature of both the department and the requirements for preparing general science teachers, the department administers the program designed to lead to general science certification and includes majors of that category as department members.

### Minor in Geology

The minor in Geology consists of 17 semester hours. Required are GS121/122 and GS131/132. Three upper-level (300 or higher) courses in geology (total nine credits) will make up the remaining requirements for the minor in Geology totaling seventeen credits.

### Minor in Geoscience

The requirement for the minor in Geoscience will be 16 semester hours of geoscience, taken within the following framework. Students must complete one course in each discipline within the department: Astronomy, 3 semester hours; Geology, 4 semester hours; Meteorology, 3 semester hours; Oceanography, 3 semester hours, for a total of 13 semester hours. The additional 3 semester hours can be taken in any one of the aforementioned disciplines. Liberal Studies nonlaboratory courses GS141, 150, 151, and 221 will not be acceptable toward the minor in Geoscience.

### Bachelor of Science—Geology

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 56-57
**Mathematics:** MA123
**Natural Science:** CH111/112 or 113/114
**Liberal Studies electives:** MA124, no courses with GS elective

**Major:** 42
**Required courses: (1)**

| | | |
|---|---|---|
| GS121 | Physical Geology | 3sh |
| GS122 | Physical Geology Laboratory | 1sh |
| GS131 | Historical Geology | 3sh |
| GS132 | Historical Geology Laboratory | 1sh |
| GS321 | Mineralogy | 3sh |
| GS322 | Igneous and Metamorphic Petrology | 3sh |
| GS325 | Structural Geology | 3sh |
| GS326 | Field Geology or summer field course (offered by other universities) (1,2) | 3sh |
| GS330 | Paleontology | 3sh |
| GS362 | Plate Tectonics | 3sh |
| GS411 | Sedimentary Petrology | 3sh |
| GS412 | Stratigraphy or GS327 Geomorphology | 3sh |
| GS480 | Geoscience Seminar | 1sh |

**Controlled electives:** 9sh
GS courses 300 or above

**Other Requirements:** 8-14
**Additional Science:**

| | | |
|---|---|---|
| PY111 | Physics I Lecture | 4sh |
| PY112 | Physics II Lecture | 4sh |
| Foreign Language Intermediate Level (3,4) | | 0-6sh |

**Free Electives:** 11-18

**Total Degree Requirements:** 124

(1) Summer field camp in geology (5-9sh) is strongly recommended.
(2) A maximum of six credits from approved summer field camp may apply to a required core and controlled electives (3).
(3) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(4) Six credits of computer languages may be used to meet foreign language requirement: CO220, 310, or other higher-level CO courses with departmental permission in consultation with the Computer Science Department.

### Minor—Geology 17

**Required courses:**

| | | |
|---|---|---|
| GS121 | Physical Geology | 3sh |
| GS122 | Physical Geology Laboratory | 1sh |
| GS131 | Historical Geology | 3sh |
| GS132 | Historical Geology Laboratory | 1sh |
| Three upper-level (300 or higher) courses in Geology | | 9sh |

### Bachelor of Science—Environmental Geoscience

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 56-57
**Mathematics:** MA123
**Natural Science:** CH111/112 or CH113/114
**Liberal Studies electives:** MA124, no courses with GS prefix

**Major:** 27
**Required courses:**

| | | |
|---|---|---|
| GS121 | Physical Geology | 3sh |
| GS122 | Physical Geology Laboratory | 1sh |

| | | |
|---|---|---|
| GS131 | Historical Geology | 3sh |
| GS132 | Historical Geology Laboratory | 1sh |
| GS310 | Environmental Geology | 3sh |
| GS321 | Mineralogy | 3sh |
| GS322 | Igneous and Metamorphic | 3sh |
| GS325 | Structural Geology | 3sh |
| GS331 | Hydrogeology | 3sh |
| GS332 | Geochemistry | 3sh |
| GS480 | Geoscience Seminar | 1sh |

**Other Requirements:** 15

**Biology sequence:**

| | | |
|---|---|---|
| BI111 | Principles of Biology I | 4sh |
| BI250 | Principles of Microbiology | 3sh |

**Chemistry sequence:**

| | | |
|---|---|---|
| CH231 | Organic Chemistry I | 4sh |
| CH323 | Analytical Methods | 4sh |

**Controlled electives:** 8-9

BI112, BI272, BI321, BI362, CH322, CH341, CO110, CO220, CO250, CO310, GE314, GE415, GS326, GS327, GS411, GS432, GS440, PY111/121 (1), PY112/122

Foreign Language Intermediate Level (2,3) 0-6sh

**Free Electives:** 10-18

**Total Degree Requirements:** 124

(1) Students who plan to pursue an advanced degree in environmental geoscience are strongly advised to take the physics sequence as their controlled electives.

(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.

(3) Six credits of computer languages may be used to meet foreign language requirement: CO220, 310, or other higher-level CO courses with departmental permission in consultation with the Computer Science Department.

## Minor—Geoscience 16

**Required courses:**

One course from each of the following:

| | |
|---|---|
| Astronomy | 3sh |
| Geology | 4sh |
| Meteorology | 3sh |
| Oceanography | 3sh |

**Additional 3sh from one of the above fields**

(300 level or higher) 3sh

## Bachelor of Science in Education—Earth and Space Science (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 55-56

**Mathematics:** MA121
**Natural Science:** CH111-112
**Social Science:** PC101
**Liberal Studies electives:** CO101, no courses with GS prefix

**College:** 30

**Professional Education Sequence: (1)**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED451 | Teaching Science in the Secondary School | 3sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 39

**Required courses:**

| | | |
|---|---|---|
| BI103 | General Biology I | 4sh |
| GS121 | Physical Geology | 3sh |
| GS122 | Physical Geology Laboratory | 1sh |
| GS131 | Historical Geology | 3sh |
| GS132 | Historical Geology Laboratory | 1sh |
| GS341 | Solar System | 3sh |
| GS342 | Stellar Astronomy | 3sh |
| GS350 | Operation of the Planetarium | 1sh |
| GS361 | Physical Oceanography | 3sh |
| GS371 | Meteorology I | 3sh |
| PY111 | Physics I Lecture | 3sh |
| PY112 | Physics II Lecture | 3sh |
| PY121 | Physics I Lab | 1sh |
| PY122 | Physics II Lab | 1sh |

**Controlled electives:**

Geology electives (not GS110, 141) 6sh

**Other Requirements:** 0

**Free Electives:** 0

**Total Degree Requirements:** 124-125

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).

## Bachelor of Science in Education—General Science Education (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 55-56

**Mathematics:** MA121 (1)
**Natural Science:** CH111-112
**Social Science:** PC101
**Liberal Studies electives:** BE/CO/IM101, no courses with prefix of chosen track in major

**College:** 30

**Professional Education sequence: (1)**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| ED451 | Teaching Science in the Secondary School | 3sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 39-40

**Required courses:**

| | | |
|---|---|---|
| BI103 | General Biology I | 4sh |
| BI104 | General Biology II | 4sh |
| GS111 | Earth Science for Educators I | 3sh |
| GS112 | Earth Science for Educators I Lab | 1sh |
| GS113 | Earth Science for Educators II | 3sh |
| GS114 | Earth Science for Educators II Lab | 1sh |
| PY111 | Physics I Lecture | 3sh |
| PY112 | Physics II Lecture | 3sh |
| PY121 | Physics I Lab | 1sh |
| PY122 | Physics II Lab | 1sh |

**Controlled electives:** 15-16sh

**Biology track:** BI210, 220, 250, 272, 480, BI elective
**Chemistry track:** CH231, 321, 351, 232, or 340 or 341
**Geoscience track:** GS121, 123, 131, 341 or 342, 361, 371
**Physics track:** PY222, 231, 242, 331, 350 (2)

**Other Requirements:** 0

| | |
|---|---|
| **Free Electives:** | **0** |
| **(#) Total Degree Requirements:** | **124-126** |

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).
(2) Note: If Physics track is elected, MA123 and 124 are required.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

## Department of Mathematics

**Gerald M. Buriok, Chairperson; Adkins, Alarcon, Anderson, Angelo, Baker, Balenovich, Bertness, Broughton, Burkett, Busovicki, Davis, Donley, Dubovsky, Early, Enderson, Feldman, Frank, Gorman, Maderer, Massey, Mitchell, Morgan, Myers, Peterson, Ray, Reber, Rettig, Scholz, Shawer, Shepler, Steelman, Stempien, G. Stoudt, R. Stoudt, Zhang; and professors emeriti Arms, Duncan, Gibson, Hartman, Hoyt, D. McBride, R. McBride, Morrell, Mueller, Oakes, Shafer, E. Smith, W. Smith, Stilwell, Willison, Wolfe, Woodard**

The Mathematics Department prepares students for work in industry, graduate school mathematics, and teaching. Degrees offered by the department are the Bachelor of Science in Mathematics, the Bachelor of Science in Applied Mathematics, and the Bachelor of Science in Education in Mathematics Education. The first two degree programs are offered within the College of Natural Sciences and Mathematics, and the third is in conjunction with the College of Education. The department also offers a minor in Mathematics and a minor in Applied Statistics.

The program for a mathematics major in the College of Natural Sciences and Mathematics is two-phased. A student may pursue a degree in Applied Mathematics or Mathematics. Those completing a degree in Mathematics will be prepared to continue their studies in mathematics in graduate school, though some may enter business, industry, or government service. Those students receiving a degree in Applied Mathematics will be primarily prepared to enter business, industry, or government service in an area where mathematics or computer science is used or to continue their studies in applied mathematics or computer science in graduate school. This student would not be expected to continue graduate studies in pure mathematics.

The Mathematics Department shares in a joint degree with the Economics Department. Students with ability and interest in economics discover that a solid background in mathematics is an essential prerequisite for advanced theoretical and applied work in the discipline. Similarly, students with talent and interest in mathematics find economics an excellent field in which to employ their skills and knowledge. The Bachelor of Arts in Mathematics/Economics allows students to combine these complementary subjects in a joint degree program administered cooperatively by the Departments of Mathematics and Economics. Enrolled students will be assigned an advisor in each department.

Those completing the program will have an exceptional background for graduate study in economics and such related fields as business, public policy, or operations research. They also will be ideally prepared to fill a wide variety of technical and quantitative positions in both government and private industry.

The program leading to the B.S. in Education in Mathematics Education prepares the student for teaching mathematics in junior or senior high school. Many graduates, however, continue their formal education in mathematics at the graduate level or work in government or industry.

Elementary education majors may elect to take a concentration of at least 15 hours in mathematics. The program of courses for this concentration is as follows: in addition to MA151 and 152, select 9 hours from the following courses: MA317, 420, 456, 457, 458, 459, 471, or 481.

### Minor in Mathematics

The minor in Mathematics consists of a minimum of 17 semester hours in mathematics. The minor is Mathematics may offer preparation for advanced study in areas such as Economics, Computer Science, Physics, and other natural sciences. Any student who is required to take a year of calculus should consider this minor.

### Minor in Applied Statistics

The minor in Applied Statistics, consisting of seventeen credits, may be of interest to students who are required to take a calculus course and a course in probability and statistics. This includes, but is not limited to, students in the Eberly College of Business, Safety Science majors, and Computer Science majors.

A cumulative QPA of at least 2.0 in MA courses is required for a minor in Mathematics or Applied Statistics. The Mathematics Department will not certify a minor for a transfer student unless at least two of the courses counting for the minor have been completed in the IUP Mathematics Department.

### Bachelor of Science—Applied Mathematics

| | | | |
|---|---|---|---|
| **Liberal Studies:** As outlined in Liberal Studies section with the following specifications: | | | **50-52** |
| **Mathematics:** (included in major) | | | |
| **Liberal Studies electives:** no courses with MA prefix | | | |
| **Major:** | | | **40-41** |
| **Required courses:** | | | |
| MA127 | Calculus I | 4sh | |
| MA128 | Calculus II | 4sh | |
| MA171 | Introduction to Linear Algebra | 3sh | |
| MA216 | Probability and Statistics for Natural Sciences | 4sh | |
| MA227 | Calculus III | 4sh | |
| MA241 | Differential Equations | 3sh | |
| MA271 | Introduction to Algebraic Structures | 3sh | |
| **Controlled electives: (2)** | | | |
| Two courses from list: MA371, 421, 422, 423, 424, 427, 476, 477 | | 6sh | |
| One of the following two-course sequences: MA342/CO450; MA363/364; MA445/446 | | 6-7sh | |
| A minimum of three additional semester hours from the list of controlled electives above or the following: MA353, 425, 447, 465, 481 | | 3sh | |
| **Other Requirements:** | | | **6-12** |
| **Computer Science:** | | | |
| CO110 | Problem Solving and Structured Programming | 3sh | |
| CO250 | Introduction to Numerical Methods | 3sh | |
| Foreign Language Intermediate Level (1) | | 0-6sh | |
| **Free Electives:** | | | **19-28** |
| **Total Degree Requirements:** | | | **124** |

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) A student may select courses to fulfill requirements for specialized track.
   a. Actuarial/Statistics: MA363, 364, 421, 422, 446, 465
   b. Scientific/Engineering: MA241, 342, 363, 364, 371, 423, 445, 446
   c. Math Analyst: MA241, 342, 363, 364, 371, 445 or 446, 476, CO minor

## Bachelor of Science—Mathematics

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **50-52**
**Mathematics:** (included in major)
**Liberal Studies electives:** no courses with MA prefix

**Major:** **40-41**
**Required courses:**

| | | |
|---|---|---|
| MA127 | Calculus I | 4sh |
| MA128 | Calculus II | 4sh |
| MA171 | Introduction to Linear Algebra | 3sh |
| MA216 | Probability and Statistics for Natural Sciences | 4sh |
| MA227 | Calculus III | 4sh |
| MA241 | Differential Equations | 3sh |
| MA271 | Introduction to Algebraic Structures | 3sh |

**Controlled electives:**
Four courses from list: 12sh
MA371, 421, 422, 423, 424, 427, 476, 477
A minimum of three additional semester hours from the list of controlled electives above or the following:
MA342, 350, 353, 355, 363, 364, 425, 445, 446, 447, 465, 481 3-4sh

**Other Requirements:** **3-9**
Computer Science:

| | | |
|---|---|---|
| CO110 | Problem Solving and Structured Programming | 3sh |

Foreign Language Intermediate Level (1) 0-6sh

**Free Electives:** **22-31**

**Total Degree Requirements:** **124**

1. Intermediate-level Foreign Language may be included in Liberal Studies electives.

## Bachelor of Arts—Economics/Mathematics

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **47-49**
**Social Science:** EC121 (included in major)
**Mathematics:** MA127 (included in major)
**Electives:** Intermediate foreign language, no course with EC or MA prefix.

**Major:** **54-56**
**Core:**

| | | |
|---|---|---|
| EC121 | Principles of Economics I | 3sh |
| EC122 | Principles of Economics II | 3sh |
| EC421 | Macroeconomics Analysis | 3sh |
| EC422 | Microeconomics Analysis | 3sh |
| MA127 | Calculus I | 4sh |
| MA128 | Calculus II | 4sh |
| MA227 | Calculus III | 4sh |
| MA171 | Introduction to Linear Algebra | 3sh |
| MA216 or EC355 | Statistics | 3-4sh |

**Economics Electives:** 12sh
Students are especially encouraged to take EC334 and EC356, but any course except EC101 may be used. EC493 may be counted only with the approval of the program coordinator.

**Mathematics Electives:** 12-13sh
At least one of the following two-semester sequences:
MA241 and 371, MA363 and 364, MA445 and 446
Two additional courses either from the above or from the following:
MA271, 342, 417 or 418, 421, 422, 423, 425, 427, 465, 476, 477

**Other Requirements:** **0**

**Free Electives:** **19-23**

**Total Degree Requirements:** **124**

## Bachelor of Science in Education—Mathematics Education (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **50-52**
**Mathematics:** (included in major)
**Social Science:** PC101
**Liberal Studies electives:** no courses with MA prefix

**College:** **30**
**Professional Education sequence: (1)**

| | | |
|---|---|---|
| CM1301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| ED456 | Teaching Math in the Secondary Schools | 3sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** **35-39**
**Required courses:**

| | | |
|---|---|---|
| MA117 | Principles of Math | 3sh |
| MA171 | Introduction to Linear Algebra | 3sh |
| MA271 | Introduction to Algebraic Structures | 3sh |
| MA353 | Theory of Numbers | 3sh |
| MA355 | Foundations of Geometry I | 3sh |
| MA350 | History of Mathematics | 2sh |
| MA460 | Computers and Calculators in Secondary School Mathematics Instruction | 3sh |
| MA452/453/454 | Math Seminar | 1sh |

**One Calculus sequence: (A or B)**

| | | | |
|---|---|---|---|
| A. | MA127 | Calculus I | 4sh (2) |
| | MA128 | Calculus II | 4sh |
| | MA227 | Calculus III | 4sh |
| B. | MA123 | Calculus I for Physics and Chemistry | 4sh |
| | MA124 | Calculus II for Physics and Chemistry | 4sh |

**One Statistics sequence: (A or B)**

| | | | |
|---|---|---|---|
| A. | MA363 | Mathematical Statistics I | 3sh (2) |
| | MA364 | Mathematical Statistics II | 3sh |
| B. | MA216 | Probability and Statistics for Natural Sciences | 4sh |

**Other Requirements:** **3**

| | | |
|---|---|---|
| CO205 | Programming Languages for Secondary Education | 3sh |

**Free Electives:** **0-6**

**Total Degree Requirements:** **124**

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).
(2) If neither Option A has been chosen, then one of MA371, MA421, MA445, and MA476 is required.

## Minor—Applied Statistics **17**

The minor in Applied Statistics consists of 17 semester hours in Mathematics selected as follows:
a) Introductory calculus course: MA121, 123, or 127
b) Introductory statistics course: MA214, 216, or 217
c) MA417
d) MA418

The remaining hours may be chosen from the following:
a) a second calculus course: MA122, 124, or 128
b) MA171
c) Any course for mathematics majors approved by the Applied Statistics Advisor.

### Minor—Mathematics

**Required courses:** 17sh
MA121 and 122 or MA123 and 124

**Controlled electives:** 9sh (1)
Other courses for math majors. MA216 and 219 may be included

(1) The following courses are excluded: MA100, 101, 102, 110, 117, 214, 217, 417, 418, and courses for the elementary education concentration in mathematics.

## Natural Science

**Allan T. Andrew, Coordinator**

The program leading to the Bachelor of Science degree in Natural Science is designed to prepare students for early admission to professional schools—optometry, podiatry, chiropractic, physical therapy, pharmacy, and dentistry. Another track prepares students for further study in engineering. The B.S. degree in Natural Science will be earned by students who transfer to professional schools that have an articulation agreement with IUP. In some cases, students interested in obtaining a four-year baccalaureate degree before entering a medical or professional school should enroll in a program of studies leading to a B.A. or B.S. degree in the departments of Biology or Chemistry. Students considering a professional career in a high-technology business or industry may wish to obtain a foundation in the Natural Sciences while using their free electives to pursue additional work in areas such as Economics, Pre-Law, or a minor in Business Administration. The B.S. in Natural Science may not be used for a second major or a second degree by majors in the College of Natural Sciences and Mathematics. For further information about these programs contact the Office of the Dean of the College of Natural Sciences and Mathematics.

### Bachelor of Science—Natural Science

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **43-44**
**Mathematics:** included in major
**Natural Science:** included in major
**Liberal Studies electives:** no courses with SC prelix
**Synthesis:** not required for three-year students who transfer to a professional school with an articulation agreement
**Writing Intensive:** one course required for three-year students who transfer to a professional school with an articulation agreement

**Major:** **44-46**
**Controlled electives: (*)**

| | |
|---|---|
| BI courses | 8sh |
| CH courses | 8sh |
| PY courses | 8sh |
| MA courses | 7-8sh |
| Computer science and/or advanced courses in Biology, Chemistry, Mathematics, or Physics | 13-14sh |

**Other Requirements:** **0-9**

| | | |
|---|---|---|
| CO101 | Microbased Computer Literacy (2) | 0-3sh |

**Free Electives:** **25-37**

**Total Degree Reqnirements:** **124**

(*) Preprofessional advisors will outline the courses required for admission to a professional school.
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Not required for tracks which include CO110 or CO250; may also be included in Liberal Studies electives.

### Bachelor of Science—Natural Science/Pre-Chiropractic Track (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **52-55**
**Mathematics:** MA121
**Natural Science:** CH111-112
**Social Sciences:** PC101, non-Western course
**Liberal Studies electives:** CO101, MA217, no courses with SC prefix
**Synthesis:** not required for three-year students who transfer to a professional school with an articulation agreement
**Writing Intensive:** one course required for three-year students who transfer to a professional school with an articulation agreement

**Major:** **30**
**Required courses:**

| | | |
|---|---|---|
| BI111 | Principles of Biology I | 4sh |
| BI150 | Human Anatomy | 3sh |
| BI151 | Human Physiology | 4sh |
| BI241 | General Microbiology | 3sh |
| CH231 | Organic Chemistry I | 4sh |
| CH232 | Organic Chemistry II | 4sh |
| PY111 | Physics I Lecture | 3sh |
| PY121 | Physics I Lab | 1sh |
| PY112 | Physics II Lecture | 3sh |
| PY122 | Physics II Lab | 1sh |

**Other Requirements:** **4-6**
Foreign Language Intermediate Level (1)

**Free Electives:**
Electives to meet minimum of ninety IUP credits and minimum of 24 credits in Humanities and Social Sciences for admission to NYCC
Maximum credits for work at NYCC 34sh

**Total Degree Requirements:** **124**

(*) Accelerated three-year New York Chiropractic College (NYCC) program: students are admitted to the NYCC accelerated program only as incoming freshmen. A maximum of thirty-five credits of work may be transferred after the first year at NYCC. Upon the completion of the first year of studies at NYCC, a transcript from NYCC is to be sent by the student to the Dean of the College of Natural Sciences and Mathematics with a note requesting application materials for graduation.
(1) Three or four credits of Intermediate-level Foreign Language may be included in Liberal Studies electives.

### Bachelor of Science—Natural Science/Pre-Dentistry Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **52-55**
**Mathematics:** MA121
**Natural Science:** CH111-112
**Social Sciences:** PC101, non-Western course
**Liberal Studies electives:** CO101, MA216 or 217, PY111
**Synthesis:** one course
**Writing Intensive:** two courses, at least one in College of Natural Sciences and Mathematics

**Major:** **31**
**Required courses:**

| | | |
|---|---|---|
| BI111 | Principles of Biology I | 4sh |
| BI112 | Principles of Biology II | 4sh |
| BI150 | Human Anatomy | 3sh |
| BI151 | Human Physiology | 4sh |
| BI241 | General Microbiology | 3sh |
| CH231 | Organic Chemistry I | 4sh |
| CH232 | Organic Chemistry II | 4sh |
| PY121 | Physics I Lab | 1sh |
| PY112 | Physics II Lecture | 3sh |
| PY122 | Physics II Lab | 1sh |

**Other Requirements:** 4-6
Foreign Language Intermediate Level

**Free Electives:** 29-34 (1)

**Total Degree Requirements:** 124

(1) Student is to work with his/her advisor to select appropriate free electives for professional school. Biochemistry and Ceramics are highly recommended courses.

## Bachelor of Science—Natural Science/Pre-Engineering Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53
**Mathematics:** MA123
**Humanities/Philosophy and Religious Studies:** PH222
**Natural Science:** CH111-112
**Social Science:** EC121, PS101 or 111
**Liberal Studies electives:** MA124, no courses with SC prefix
**Synthesis:** not required for three-year students
**Writing Intensive:** one course required for three-year students

**Major:** 33-35
**Required courses:**

| | | |
|---|---|---|
| CO110 | Problem Solving and Structured Programming | 3sh |
| CO250 | Introduction to Numerical Methods | 3sh |
| MA171 | Introduction to Linear Algebra | 3sh |
| MA241 | Differential Equations | 3sh |
| MA342 | Advanced Calculus for Applications | 4sh |
| PY131 | Physics I-C Lecture | 3sh |
| PY132 | Physics II-C Lecture | 3sh |
| PY141 | Physics I-C Lab (or PY121 Lab) | 1sh |
| PY142 | Physics II-C Lab | 1sh |
| PY331 | Modern Physics (2) | 3sh |

**Controlled electives:** One package, depending on program

**Chemical Engineering:**

| | | |
|---|---|---|
| CH231 | Organic Chemistry I | 4sh |
| CH232 | Organic Chemistry II | 4sh |

**Civil Engineering:**

| | | |
|---|---|---|
| MA216 | Probability and Statistics for Natural Sciences | 4sh |
| ----- | Technical elective | 3-4sh |

**Electrical Engineering:**

| | | |
|---|---|---|
| MA216 | Probability and Statistics for Natural Sciences | 4sh |
| ----- | Technical elective | 3-4sh |

**Industrial Engineering:**

| | | |
|---|---|---|
| MA216 | Probability and Statistics for Natural Sciences | 4sh |
| ----- | Technical elective | 3-4sh |

**Materials Science and Engineering:**

| | | |
|---|---|---|
| CH231 | Organic Chemistry I | 4sh |
| CH232 | Organic Chemistry II | 4sh |

**Mechanical Engineering:**

| | | |
|---|---|---|
| ----- | Technical electives | 6-8sh |

**Other Requirements:** 0-6
Foreign Language Intermediate Level (1)

**Free Electives:** 9

**Other Requirements:** about 64
Two years at University of Pittsburgh School of Engineering (2)

**(#)Total Degree Requirements** 159-161

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) A 2.5 QPA is required for transfer to the University of Pittsburgh.
(3) For curriculum information about the cooperative program in engineering with Drexel University, refer to the catalog section for the Physics Department.
(#) See advisory paragraph *"Timely Completion of Degree Requirements"* in catalog section on Requirements for Graduation.

## Bachelor of Science—Natural Science/Pre-Optometry Track (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 52-55
**Mathematics:** MA121
**Natural Science:** CH111-112
**Social Sciences:** PC101, EC101, non-Western course
**Liberal Studies electives:** MA216 or 217, CO101, no courses with SC prefix
**Synthesis:** not required for three-year students who transfer to a professional school with an articulation agreement
**Writing Intensive:** one course required for three-year students who transfer to a professional school with an articulation agreement

**Major:** 34
**Required courses:**

| | | |
|---|---|---|
| BI111 | Principles of Biology I | 4sh |
| BI150 | Human Anatomy | 3sh |
| BI151 | Human Physiology | 4sh |
| BI241 | General Microbiology | 3sh |
| CH231 | Organic Chemistry I | 4sh |
| CH232 | Organic Chemistry II | 4sh |
| CH351 | Biochemistry | 4sh |
| PY111 | Physics I Lecture | 3sh |
| PY121 | Physics I Lab | 1sh |
| PY112 | Physics II Lecture | 3sh |
| PY122 | Physics II Lab | 1sh |

**Other Requirements:** 0-7
Foreign Language Intermediate Level (1)

| | | |
|---|---|---|
| MA122 | Calculus II for Business, Natural, and Social Sciences | 4sh (2) |

**Free Electives:** 29-39

| | |
|---|---|
| Electives to meet minimum of ninety IUP credits | 0-3sh (3) |
| Credits from work at Pennsylvania College of Optometry | 34sh |

**Total Degree Requirements:** 124

(*) Accelerated three-year Pennsylvania College of Optometry (PCO) program: students are admitted to the PCO accelerated program only as incoming freshmen. A maximum of thirty-four credits of work may be transferred after the first year at PCO. Upon the completion of the first year of studies at PCO, a transcript from PCO is to be sent by the student to the Dean of the College of Natural Sciences and Mathematics with a note requesting application materials for graduation.
(1) Three or four credits of Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Required for many schools of optometry; recommended for PCO.
(3) Additional electives if needed to meet minimum of ninety IUP credits should be selected from the following suggestions: BI112 and BI263.

## Bachelor of Science—Natural Science/Pre-Physical Therapy Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 52-55
**Mathematics:** MA121
**Natural Science:** CH111-112
**Social Sciences:** PC101, non-Western course
**Liberal Studies electives:** CO101, MA217, no courses with SC prefix
**Synthesis:** one course
**Writing Intensive:** two courses, at least one in College of Natural Sciences and Mathematics

**Major:** 31
**Required courses:**

| | | |
|---|---|---|
| BI111 | Principles of Biology I | 4sh |
| BI112 | Principles of Biology II | 4sh |
| BI150 | Human Anatomy | 3sh |
| BI151 | Human Physiology | 4sh |
| CH231 | Organic Chemistry I | 4sh |
| CH351 | Biochemistry | 4sh |
| PY111 | Physics I Lecture | 3sh |

| | | |
|---|---|---|
| PY121 | Physics I Lab | 1sh |
| PY112 | Physics II Lecture | 3sh |
| PY122 | Physics II Lab | 1sh |

**Other Requirements:** 4-6
Foreign Language Intermediate Level

**Free Electives:** 32-37 (1)

**Total Degree Requirements:** 124

(1) A student should work with his/her advisor to select appropriate free electives for professional school.

### Bachelor of Science—Natural Science/Pre-Podiatry Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 52-55
Mathematics: MA121
Natural Science: CH111-112
Social Sciences: PC101, non-Western course
Liberal Studies electives: CO101, MA217, PY111
Synthesis: not required for three-year students who transfer to a professional school with an articulation agreement
Writing Intensive: one course required for three-year students who transfer to a professional school with an articulation agreement

**Major:** 31-34
Required courses:

| | | |
|---|---|---|
| BI111 | Principles of Biology I | 4sh |
| BI112 | Principles of Biology II | 4sh |
| BI263 | Genetics | 3sh |
| CH231 | Organic Chemistry I | 4sh |
| CH232 | Organic Chemistry II | 4sh |
| CH351 | Biochemistry | 4sh |
| PY112 | Physics I Lecture | 3sh |
| PY121 | Physics I Lab | 1sh |
| PY122 | Physics II Lab | 1sh |

**Controlled electives:**
Biology electives 3-6sh

**Other Requirements:** 4-6
Foreign Language Intermediate Level

**Free Electives:**
Electives to meet minimum of ninety IUP credits
Credits from work at Pennsylvania College of Podiatric Medicine 34sh

**Total Degree Requirements:** 124

## Department of Physics

**Richard D. Roberts, Chairperson; Fox, Freeman, Gaggini, Giniewicz, Hershman, Karimi, Matolyak, Matous, Numan, Ramsey, Sobolewski, Talwar, Whitson, Wijekumar; and professors emeriti Berry, Buckwalter, McNamara, Riban, Waddell**

The goal of the Department of Physics is to prepare fully qualified individuals for productive careers in physics. Three degrees are offered within the College of Natural Sciences and Mathematics: the Bachelor of Science in Physics, the Bachelor of Arts in Physics, and the Bachelor of Science in Applied Physics. These programs offer adequate preparation for graduate study in physics or for research in industrial technology. The applied physics degree provides a strong technical background for work in solid-state electronics or for interdisciplinary research in the areas of computer science, chemistry, biology, and geology. A Bachelor of Science degree in Education with a major in Physics is offered through the College of Education. A two-year pre-engineering program is offered in cooperation with Drexel University wherein students transfer to Drexel after two years. The department also offers a minor in Physics, as well as general science courses which satisfy the Natural Science requirements of the Liberal Studies program.

### Minor in Physics

To minor in Physics, a student must successfully complete 15 semester hours in Physics which must consist of at least three courses at the 200 level or higher.

### Cooperative Pre-Engineering (Chemical, Civil, Electrical, Materials, Mechanical) Program with Drexel University

Common to all pre-engineering programs are the following science and mathematics requirements: *PY131/141, PY132/142, PY322, PY342, *MA123, *MA124, MA171, MA241, *CH111, *CH112 (*or appropriate substitute).

Further requirements depend on the particular engineering program chosen. Complete information regarding a specific program may be obtained from the physics department.

For information on the Cooperative Pre-Engineering program with the University of Pittsburgh, see the catalog section for Natural Science and the program outline for "Bachelor of Science in Natural Science/Pre-Engineering."

### Bachelor of Arts—Physics

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 56-57
Mathematics: MA123
Natural Science: PY131/141-132/142
Liberal Studies electives: MA124, no courses with PY prefix

**Major:** 28
Required courses:

| | | |
|---|---|---|
| PY131 | Physics I-C Lecture | *sh |
| PY132 | Physics II-C Lecture | *sh |
| PY141 | Physics I-C Lab | *sh |
| PY142 | Physics II-C Lab | *sh |
| PY222 | Mechanics I | 2sh |
| PY223 | Mechanics II | 2sh |
| PY231 | Electronics | 4sh |
| PY322 | Electricity and Magnetism I | 2sh |
| PY323 | Electricity and Magnetism II | 2sh |
| PY331 | Modern Physics | 3sh |
| PY350 | Intermediate Experimental Physics I | 3sh |
| PY351 | Intermediate Experimental Physics II | 3sh |
| PY473 | Quantum Mechanics I | 4sh |

**Controlled electives:**
One additional PY majors course 3sh

**Other Requirements:** 22-28
Additional mathematics and computer science:

| | | |
|---|---|---|
| CO110 | Problem Solving and Structured Programming | 3sh |
| MA241 | Differential Equations | 3sh |
| MA342 | Advanced Mathematics for Applications | 4sh |
| Additional natural science sequence | | 6sh |
| Additional social or natural science sequence (advanced) | | 6sh |
| Foreign Language Intermediate Level (1) | | 0-6sh |

**Free Electives:** 11-18

**Total Degree Requirements:** 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

### Bachelor of Science—Physics

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 56-57
Mathematics: MA123
Natural Science: PY131/141-132/142
Liberal Studies electives: MA124, no courses with PY prefix

**Major:** 37
Required courses:

| | | |
|---|---|---|
| PY131 | Physics I-C Lecture | *sh |
| PY132 | Physics II-C Lecture | *sh |
| PY141 | Physics I-C Lab | *sh |

| | | |
|---|---|---|
| PY142 | Physics II-C Lab | *sh |
| PY222 | Mechanics I | 2sh |
| PY223 | Mechanics II | 2sh |
| PY231 | Electronics | 4sh |
| PY242 | Optics | 3sh |
| PY322 | Electricity and Magnetism I | 2sh |
| PY323 | Electricity and Magnetism II | 2sh |
| PY331 | Modern Physics | 3sh |
| PY342 | Thermal and Statistical Physics | 3sh |
| PY350 | Intermediate Experimental Physics I | 3sh |
| PY351 | Intermediate Experimental Physics II | 3sh |
| PY473 | Quantum Mechanics I | 4sh |

**Controlled electives:**
One course from list: PY472 or PY490 3sh
One additional PY majors course 3sh

**Other Requirements:** 13-19

| | | |
|---|---|---|
| CO110 | Problem Solving and Structured Programming | 3sh |
| MA241 | Differential Equations | 3sh |
| MA342 | Advanced Mathematics for Applications | 4sh |

One from list: CO250, MA171, MA363, MA421, MA423 3sh
Foreign Language Intermediate Level (1) 0-6sh

**Free Electives:** 11-18

**Total Degree Requirements:** 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

## Bachelor of Science—Applied Physics

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 56-57
**Mathematics:** MA123
**Natural Science:** CH111-112 (replaced by CH113-114 for Chemistry track)
**Liberal Studies electives:** MA124, no courses with PY prefix

**Major:** 28
**Required courses:**

| | | |
|---|---|---|
| PY131 | Physics I-C Lecture | 3sh |
| PY132 | Physics II-C Lecture | 3sh |
| PY141 | Physics I-C Lab | 1sh |
| PY142 | Physics II-C Lab | 1sh |
| PY222 | Mechanics I | 2sh |
| PY231 | Electronics | 4sh |
| PY242 | Optics | 3sh |
| PY322 | Electricity and Magnetism I | 2sh |
| PY331 | Modern Physics | 3sh |
| PY352 | Applied Physics Laboratory | 3sh |
| PY355 | Computer Interfacing | 3sh |

**Other Requirements:** 9-15

| | | |
|---|---|---|
| MA241 | Differential Equations | 3sh |
| CO110 | Problem Solving and Structured Programming | 3sh |
| CO250 | Introduction to Numerical Methods | 3sh |

Foreign Language Intermediate Level (1) 0-6sh

**Controlled electives: According to Track** 23-27
**Solid State Electronics Track:** CO300, MA342, PY323, 342, 353, 432, 475, 476 24 sh
**Computer Science Track:** PY342, 353, 432, 475, 476 CO300, 310, 410, 450 27 sh
**Chemistry Track:** MA342, CH231, 232, 323, 341, 342, 343 24 sh
**Biology Track:** BI111, 120, CH231, 323, 351. Two biology electives from the following: BI250, 263, 350, 401, 472 27 sh
**Geology Track:** GS121, 122, 131, 132 Five Geoscience electives from the following: GS321, 325, 326, 362, 412, 440, 481 23 sh

**Free Electives:** 3-8

**Total Degree Requirements:** 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

## Bachelor of Science in Education—Physics (*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 56-57
**Mathematics:** MA123
**Natural Science:** CH111-112
**Social Sciences:** PC101
**Liberal Studies electives:** MA241; BI103; GS110, 121, 141, or 221; no courses with PY prefix

**College:** 30
**Professional Education sequence: (1)**

| | | |
|---|---|---|
| CM301 | Technology for Learning and Instruction | 3sh |
| ED242 | Pre-student Teaching Clinical Experience I | 1sh |
| ED342 | Pre-student Teaching Clinical Experience II | 1sh |
| ED441 | Student Teaching | 12sh |
| ED442 | School Law | 1sh |
| ED451 | Teaching Science in the Secondary School | 3sh |
| EP202 | Educational Psychology | 3sh |
| EP377 | Educational Tests and Measurements | 3sh |
| FE202 | American Education in Theory and Practice | 3sh |

**Major:** 32
**Required courses:**

| | | |
|---|---|---|
| PY131 | Physics I-C Lecture | 3sh |
| PY132 | Physics II-C Lecture | 3sh |
| PY141 | Physics I-C Lab | 1sh |
| PY142 | Physics II-C Lab | 1sh |
| PY222 | Mechanics I | 2sh |
| PY223 | Mechanics II | 2sh |
| PY231 | Electronics | 4sh |
| PY242 | Optics | 3sh |
| PY322 | Electricity and Magnetism I | 2sh |
| PY331 | Modern Physics | 3sh |
| PY342 | Thermal and Statistical Physics | 3sh |
| PY350 | Intermediate Experimental Physics I | 3sh |

**Controlled electives:**
Physics electives 2sh

**Other Requirements:** 8
**Additional Math courses:**

| | | |
|---|---|---|
| MA124 | Calculus II for Physics and Chemistry | 4sh |
| MA342 | Advanced Mathematics for Applications | 4sh |

**Free Electives:** 0

**(#)Total Degree Requirements:** 126-127

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

## Department of Psychology

**Carl W. Schneider, Chairperson; Barrett, Berman, Goodwin, Grover, Kaniasty, Laporte, Luo, Magee, Marquette, McHugh, Pavloski, Raeff, Rittle, Robertson, Sadler, Stires, Strand, Sussmann, Thornton, Walz, Zanich, Zimny; and professors emeriti Jacobs, Lore**

The program in psychology leads to a Bachelor of Arts degree and is designed to give the student an understanding of the methods and major findings in the science of behavior and mental processes. The major offers the background required for graduate work in psychology and also preparation for such related fields as social work, personnel work, advertising, medicine, law, and theology. The department also offers a minor in psychology.

An honors program has been developed to enrich the education of qualified psychology majors and assist such students in gaining entrance to graduate school by providing classroom and research experiences which will prepare them for work at the graduate level.

A track in applied psychology offers students a firm background in the science of psychology, preparation for nonclinical applications of psychology to the solution of human and social problems in private and public organizations, and preparation for graduate study in the applied area of psychology. The core for the track is the same as for the psychology major; coursework in applied psychology is provided by enrolling in appropriate psychology electives and a carefully designed concentration of courses outside the department.

All psychology majors are required to take a minor or a concentration in another discipline.

### Bachelor of Arts—Psychology

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54-55
**Mathematics:** MA217
**Natural Science:** BI103-104 recommended
**Social Science:** PC101
**Liberal Studies electives:** BE/CO/IM101, no courses with PC prefix

**Major:** 33

**Required courses:**

| | | |
|---|---|---|
| PC290 | Research Design and Analysis I | 4sh |
| PC291 | Research Design and Analysis II | 4sh |

**Controlled electives:**
A minimum of one course from each of these six core areas: (1)

| | | |
|---|---|---|
| A. | Developmental Psychology: PC310, 311, 312, 315 | 3-4sh |
| B. | Individual Differences: PC320, 321, 322 | 3sh |
| C. | Social/Environmental: PC330, 331, 335 | 3-4sh |
| D. | Cognition/Learning: PC340, 341, 342, 345 | 3-4sh |
| E. | Biological Bases of Behavior: PC350, 352, 355, 356 | 3-4sh |
| F. | Metatheoretical Perspectives in Psychology: PC410, 411 | 3sh |
| | Other PC electives beyond PC101 | 3-5sh |

**Other Requirements:** 15-21

| | |
|---|---|
| Foreign Language Intermediate Level (2) | 0-6sh |
| Minor/concentration: | 15sh |

**Free Electives:** 15-22

**Total Degree Requirements:** 124

(1) At least two must be content-based laboratory courses.
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.

### Bachelor of Arts—Psychology/Applied Psychology Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54-55
**Mathematics:** MA217
**Natural Science:** BI103-104 recommended
**Social Science:** PC101, EC121
**Liberal Studies electives:** BE/CO/IM101, no courses with PC prefix

**Major:** 38

**Required courses:**

| | | |
|---|---|---|
| PC290 | Research Design and Analysis I | 4sh |
| PC291 | Research Design and Analysis II | 4sh |
| PC421 | Psychology of Work | 3sh |
| PC425 | Experimental Organizational Psychology | 4sh |
| PC493 | Psychology Practicum (1) | 3sh |

**Controlled electives:**
A minimum of one course from each of these six core areas: (2)

| | | |
|---|---|---|
| A. | Developmental Psychology: PC310, 311, 312, 315 | 3-4sh |
| B. | Individual Differences: PC320, 321, 322 | 3sh |
| C. | Social/Environmental: PC330, 331, 335 | 3-4sh |
| D. | Cognition/Learning: PC340, 341, 342, 345 | 3-4sh |
| E. | Biological Bases of Behavior: PC350, 352, 355, 356 | 3-4sh |
| F. | Metatheoretical Perspectives in Psychology: PC410, 411 | 3sh |

**Other Requirements:** 15-21

**Outside concentration:**

| | | |
|---|---|---|
| EC122 | Principles of Economics II | 3sh |
| EC330 | Labor Economics | 3sh |
| LR480 | Principles and Practices of Collective Bargaining | 3sh |
| | Two courses, as approved by advisor (3) | 6sh |
| | Foreign Language Intermediate Level (4) | 0-6sh |

**Free Electives:** 11-18

**Total Degree Requirements:** 124

(1) Department recommends at least six credits of PC493.
(2) At least two must be content-based laboratory courses.
(3) Department highly recommends PC424 and recommends one course from business or another applied area.
(4) Intermediate-level Foreign Language may be included in Liberal Studies electives.

### Minor—Psychology 20

**Required courses:**

| | | |
|---|---|---|
| PC101 | General Psychology | 3sh (1) |
| PC280 | Psychological Inquiry or | 3sh |
| PC290 | Research Design and Analysis I | 4sh (2) |
| | Four other PC electives beyond PC101 | 12sh (3) |

(1) Meets Liberal Studies requirement.
(2) Prerequisite MA217.
(3) Selected in consultation with the director of the undergraduate program.

### Minor—Psychological Science 17-18

**Required courses:**

| | | |
|---|---|---|
| PC101 | General Psychology | 3sh (1) |
| PC290 | Research Design and Analysis I | 4sh (2) |
| | One course from core areas A, B, or C | 3-4sh (3) |
| | One course from core areas D or E | 3-4sh (3) |
| | One PC elective | 3-4sh |

(1) Meets Liberal Studies requirement.
(2) Prerequisite MA217.
(3) At least one course must be a content-based laboratory course.

# The School of Continuing Education

## Nicholas E. Kolb, Dean

The mission of the School of Continuing Education is to serve the lifelong educational needs of nontraditional students, working adults, professional organizations, local and state agencies, and the citizens of the commonwealth by providing access to the academic and human resources of IUP.

The School of Continuing Education was created by the IUP Board of Trustees in May, 1966. Today, the school comprises the Division of Credit Programs, the Division of Conferences and Noncredit Programs, the Highway Safety Center, and the Criminal Justice Training Center. The school is characterized by its commitment to academic excellence and high-quality programs. The school maintains a dynamic environment which fosters innovation and experimentation in order to improve programs continually and respond to the ever-changing needs of society.

## Division of Credit Programs

**Edward W. Nardi, Assistant Dean**

The Division of Credit Programs offers a variety of opportunities for the adult and nontraditional learner to access the academic resources of IUP on a part-time basis. Courses may be selected from day or evening offerings.

The Associate of Arts Degree in General Studies is designed for the nontraditional or adult learner who seeks to acquire a broad base of knowledge in the liberal arts. This program consists of the core of Liberal Studies requirements of the IUP bachelor's degree programs plus nine to twelve credits of electives. The student is encouraged to develop a plan of study with his or her academic advisor which will bring focus to the individual's interest in a particular area or subject. No more than thirty credits may be transferred into this degree program from other colleges.

The Bachelor of Science degree in General Studies is designed for the mature adult student, who under faculty advisement can explore and develop an individualized plan of study which does not approach any existing IUP major. This self-designed plan of study must be based on a specific theme which incorporates basic and applied coursework within a theoretical framework culminating in a senior-year independent research project. At the time of application for degree candidacy through the School of Continuing Education or transfer from another major, the student must submit a plan of study which contains the proposed theme, rationale, and courses needed to satisfy the Special Interest Area. A faculty member will be assigned to assist with the plan of study prior to acceptance to degree candidacy. Students other than School of Continuing Education students must have completed 45sh before a request for transfer will be honored.

The student's plan of study, which is designed to fulfill the Special Interest Area, must be approved by the student's advisor and the dean of the School of Continuing Education.

### Associate of Arts—General Studies

| | | |
|---|---|---|
| **Liberal Studies:** as outlined in the Liberal Studies Section with the following specifications and modifications: | | **50-53** |
| **Learning Skills** | 10-11sh | |
| **Humanities** | 9sh | |
| **Fine Arts** | 3sh | |
| **Natural Science** | 7-8sh | |
| **Social Science** | 9sh | |
| **Health and Wellness/ROTC** | 3-4sh | |
| **Controlled Liberal Studies Electives** | 9sh | |
| **Free Electives** | | **9-12** |
| **Total Degree Requirements:** | | **62** |

### Bachelor of Science—General Studies

| | |
|---|---|
| **Liberal Studies:** As outlined in Liberal Studies section | **53-54** |
| **General Area of Study**<br>Choose at least 6sh from three of the four areas listed below. At least 12sh must be 300-level or above. Courses should relate to theme developed in Special Interest Area. | **24** |
| **Human Behavior and Development Area**<br>Anthropology, Health, Home Economics, Psychology, Sociology | |
| **Social and Political Systems Area**<br>Economics, Geography and Regional Planning, History, Industrial and Labor Relations, Political Science | |
| **Arts, Letters, and Culture Area**<br>Art, Communications Media, English, French, German, Journalism, Music, Philosophy, Religious Studies, Spanish, Theater | |
| **Science, Mathematics, and Technology Area**<br>Biology, Chemistry, Computer Science, Geoscience, Mathematics, Physics | |
| **Special Interest Area**<br>With approval of advisor, student may select, from any department listed above, courses which focus on a particular need or interest. At least 12sh must be 300-level or above. The program must include either one research course which provides opportunities for extensive writing or an independent study project. Some courses will not be available to General Studies majors. | **21** |
| **Electives**<br>At least 6sh must be 300-level or above | **25-26** |
| **Total Degree Requirements:** | **124** |

(1) Individually planned theme may not duplicate any existing degree programs which are otherwise available at IUP, nor may they be used to circumvent specific requirements within an existing major.
(2) No more than 30 semester hours taken in any one department will count toward graduation.
(3) In the application of university policies, the Special Interest Area is considered as the major. Specifically, in order to graduate, students must be in academic good standing and attain a 2.00 grade point average in the Special Interest Area.

### Part-time Studies Program (Nondegree)
The Part-time Studies Program is designed to offer the adult and nontraditional learner the opportunity to begin or renew a college education at IUP. Through this program an individual may enroll in undergraduate credit courses to pursue personal interests, acquire new skills, or work toward formal admission to degree candidacy. Credit earned in this program may be applied to a degree upon formal admission to an IUP degree program.

### Postbaccalaureate Program
The Postbaccalaureate Program is designed to provide access to undergraduate courses to individuals who have an earned baccalaureate degree. Students may be seeking a second bachelor's degree, additional teacher certification, or personal enrichment. Postbaccalaureate students may attend IUP on a part-time or full-time basis.

### Off-Campus Studies Program
The Off-Campus Studies Program is designed to support the efforts of IUP and its faculty to offer academic programs to specific groups of individuals through the delivery of university courses at off-campus locations. The Master of Education in Elementary Education, the Master of Arts in Adult and Community Education, the Executive MBA Program, and the Master of Arts in Criminology are offered in the IUP Center in Monroeville. In addition, the Executive MBA is offered in Johnstown and the Master of Science in Safety Sciences is available in Harrisburg. Undergraduate and graduate courses are also available periodically at various off-campus locations throughout the commonwealth.

### Adult Advisement Services
Adult Advisement Services provides the part-time, nontraditional, and adult learner access to academic exploration and planning through individual conferences and workshops. Seminars are offered throughout the year to provide the opportunity for adult learners to become acquainted with the many resources of the university.

## Division of Conferences and Noncredit Programs

**Donna M. Griffith, Director**

The division offers a wide variety of noncredit programs which meet community needs in the areas of public service, professional development, and personal enrichment.

### Business, Industry, and Labor
Courses and workshops are offered in the following areas: Computer Literacy, Management Development, Small Business Development, and Customized Training. Courses may be offered at IUP or at the business/industry site, as preferred.

### Community-University Studies
Noncredit courses and workshops are offered in Indiana, Kittanning, and Punxsutawney. Personal growth and enrichment topics include creative leisure, self-improvement, fitness, culinary arts, languages, money and finances, art/music/literature, Elderhostel, and Mornings with the Professors. There are no exams, no grades, and no pressure. The program is provided as a service to the community.

### Special Programs
The education and training needs of health and human service professionals are met through course offerings, one-day workshops, seminars, and conferences. Additionally, Youth Experience in Summer (YES) and College Connections for Kids provide educational enrichment for youth in elementary through high school grades.

### Conferences
The division facilitates conferences offered by academic departments during the year and hosts off-campus groups and organizations during the summer months. The conference staff also provides consulting services and coordinates conferences throughout the state for IUP and other organizations.

## Highway Safety Center

**Richard J. Hornfeck, Director**

IUP's Highway Safety Center attempts to address the highway safety needs of the commonwealth through a variety of programs and activities. The Highway Safety Center programs encompass activity in five major areas: 1) research, surveys, and studies, 2) education (teaching), 3) training and conferences, 4) field and extension services, and 5) traffic safety communications and information exchange.

### Teacher Certification in Driver Education
Through cooperative effort with IUP's Department of Health and Physical Education, the Highway Safety Center coordinates and directs IUP's Teacher Certification Program in Driver Education.

### IUP Regional Highway Safety Project
The IUP Regional Highway Safety Project is a federally funded program contracted with the Pennsylvania Department of Transportation's Center for Highway Safety. Originating at IUP in January, 1987, under the title of the Indiana County Seat Belt Program, its purpose was to increase public awareness and the usage of occupant restraints. The program expanded its emphasis and territory in 1989 and now includes the counties of Armstrong, Jefferson, and Clearfield. Programs for corporations, schools, civic groups, law enforcement agencies, etc., include topics such as occupant safety, bicycle safety, pedestrian safety, safe driving characteristics, and DUI. The project also serves as a resource to other community safety groups by providing printed materials, audiovisual aids, crash-car dummy costumes, and the "Seat Belt Convincer." A Car Seat Loaner Program also provides car seats to residents in Indiana County.

### Driver Training Programs
From basic driver education programs for beginning drivers to truck driver training to advanced driver training programs in emergency driving techniques, the Highway Safety Center provides a cadre of courses, all designed to meet the needs of the student.

### Emergency Services Training
This is a large, diversified program area designed to meet the training needs of ambulance, fire, and police personnel in the areas of emergency medical services and rescue.

### Traffic Accident Investigation
Traffic Accident Investigation programs are available for safety directors, insurance adjusters, and police personnel. Courses range from basic investigation up to and including accident reconstruction.

## Criminal Justice Training Center

**Gary M. Welsh, Director**

The Criminal Justice Training Center's role in both the university and the community is to provide high-quality education and training programs for the continuing professionalism of the criminal justice system.

These programs include seminars for in-service personnel in fulfillment of mandatory continuing education requirements. They are conducted on an "as needed" basis covering an unlimited range of topics, such as vehicle and criminal law updates, search and seizure, accident investigation, alcohol enforcement, and driver proficiency. Special programs are provided to offer the basic 600-hour academy training required for law enforcement service under Mandatory Act 120. Training under the Lethal Weapons Act 235 provides the basic requirements and mandatory recertification for armed security personnel.

# Course Descriptions

***Credit designation at right of title is expressed in (c) class hours per week, (l) lab or (d) discussion section hours per week, and (sh) semester hours of credit per semester.***

## AD — Administrative Services
Department of Office Systems and Business Education
Eberly College of Business

**Note:** All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

**AD101 Introduction to Business** 3c-0l-3sh
Overview of the principles, practices, and methods common to most business firms in a private enterprise system. (Not open to juniors and seniors in Business)

**AD221 Business Technical Writing** 3c-0l-3sh
**Prerequisite:** EN101
Application of business and technical writing styles, letters, memos, reports, procedures, and manuals are some areas of concern. Emphasis on clear, concise writing style. (May not be used as a substitute for AD321)

**AD 321 Business and Interpersonal Communications** 3c-0l-3sh
**Prerequisite:** EN101, 202
Study of communication theory and principles as applied to business situations and practices: development of communication skills in areas of communication such as speaking, writing, listening, and nonverbal communicating. Emphasis on building effective interpersonal relations in a business environment.

**AD481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**AD482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## AE — Art Education
Department of Art
College of Fine Arts

**AE281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**AE315 Survey of Art Education** 3c-0l-3sh
A seminar to introduce the art education major to the principles and practices of teaching visual arts K through 12. Field experiences, pre-student teaching activities, introduction to literature, and history and philosophies of art education emphasized. (Prerequisite to student teaching) Fall only.

**AE317 Art Education Methodology at the Elementary Level** 1c-3l-3sh
Examines children's artistic development, art programs, planning, motivation, and evaluation. Weekly teaching experience is an integral part of the course. (Prerequisite to student teaching) Fall only.

**AE318 Art Education Methodology at the Secondary Level** 1c-3l-3sh
Relationship of art education to the total secondary curriculum is studied to determine goals of junior-senior high school art. The adolescent creative products are analyzed to help the prospective art teacher to identify with problems of students. (Prerequisite to student teaching) Spring only.

**AE481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**AE482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## AF — Pan-African Studies
College of Humanities and Social Sciences

**AF131 Introduction to Pan-African Studies** 3c-0l-3sh
A multidisciplinary introduction to Africa and the African diaspora. The course explores the effects of Africa's history, in particular colonialism and independence, on present-day Africa; it examines the relationship between Africa and the African diaspora with special attention to African arts, social systems, and political and economic development; it also looks at Africa's contribution to contemporary culture in the Americas.

## AG — Accounting
Department of Accounting
Eberly College of Business

**Note:** All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

**AG201 Accounting Principles I** 3c-0l-3sh
Introduces the student to the accounting cycle in service and merchandising concerns using the single proprietorship form of business organization; covers use of special journals and subsidiary ledgers in the accounting system as well as accounting and internal control procedures for cash, receivables, inventory, and plant and equipment.

**AG202 Accounting Principles II** 3c-0l-3sh
**Prerequisites:** C or better in AG201, sophomore status
Covers accounting principles and procedures for payroll, partnerships, corporations, long-term liabilities and investments, and manufacturing firms with a general accounting system. Introduces the student to cost accounting systems. financial statements analysis, budgeting, and use of accounting information in making managerial decisions.

**AG281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**AG299 Cooperative Education I** 0c-0l-2sh
**Prerequisites:** Completion of 55 credits with a minimum GPA of 2.0 including at least a "C" in AG201, AG202, and IM241, and approval of the cooperative advisor
The initial experience in a program designed to combine classroom theory with practical application through job-related experiences. Students are actively employed in the accounting area in business, industry, government, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives in accounting. The student is expected to complete subsequently AG399 or an internship.

**AG300 Managerial Accounting** 3c-0l-3sh
**Prerequisite:** AG202 (not open to Accounting majors)
Emphasizes the use of accounting information in performing the managerial functions of planning, control, decision making, and performance evaluation. Note: Accounting majors will not be granted degree credit for AG300.

**AG301 Intermediate Accounting I** 3c-0l-3sh
**Prerequisite:** C or better in AG202
An overview of the foundation of accounting theory dealing with application of generally accepted accounting principles as promulgated in professional pronouncements to the reporting process and to accounting for various asset items in the financial statements.

**AG302 Intermediate Accounting II** 3c-0l-3sh
**Prerequisite:** C or better in AG301
Application of generally accepted accounting principles to various areas such as accounting for corporations, long-term investments in securities, bonds, pension costs, leases, etc.

**AG311 Cost Accounting** 3c-0l-3sh
**Prerequisite:** C or better in AG202
Cost accounting methods and procedures including cost accumulation under job order cost system and process cost system, cost allocation, budgeting, and accounting for spoilage, joint, and by-products. The planning and control aspect of cost accounting is emphasized.

**AG399 Cooperative Education II** 0c-0l-3sh
**Prerequisites:** AG299; completion of 85 credits with an overall GPA of 2.0; a GPA of 2.3 in AG301, AG302, and AG311 with at least a "C" in each course; and approval of the cooperative advisor
The subsequent course in cooperative education is designed to combine classroom theory with practical application through job-related experiences. Cooperative Education students are actively employed in the accounting area in business, industry, government, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives in accounting.

**AG401 Advanced Accounting** 3c-0l-3sh
**Prerequisite:** AG302
Study of accounting issues of specialized nature including partnerships, organization and liquidation, agency and branch accounting, accounting for business combinations, preparation of consolidated financial statements, accounting for government and not-for-profit entities, accounting for estates and trusts, and receivership accounting.

**AG412 Advanced Cost Accounting** 3c-0l-3sh
**Prerequisite:** C or better in AG311
Study of budgets, standard costs, direct and absorption costing, analysis of cost variances, and extensive analysis of various cost control and profit planning programs.

**AG421 Federal Taxes** 3c-0l-3sh
**Prerequisite:** C or better in AG202
Acquaints the student with Federal Income Tax Laws as they apply to individual taxpayers and partnerships.

**AG422 Federal Taxation of Corporations, Partnerships, Estates, and Trusts** 3c-01-3sh
**Prerequisites:** AG421 and 302
Advanced course in federal income taxation as it applies to taxpayers other than individuals. Covers the tax treatment of those property transfers subject to federal and state gift and death taxes. The tax planning aspect of the various course topics as well as tax research methodology are also discussed.

**AG431 Auditing** 3c-0l-3sh
**Prerequisite:** AG302
Study of auditing theory and practical application of auditing standards and procedures to the review, testing, and evaluation of accounting controls and to the verification of transactions and balances to express an opinion in an audit report on the fairness of financial statements' presentation.

**AG435 Internal Auditing** 3c-0l-3sh
**Prerequisite: AG431**
This course covers four issues: foundations for internal auditing, administering internal auditing activities, operational areas, and special relationships and evaluation for internal auditing.

**AG441 Accounting for Government and Nonprofit Organizations** 3c-0l-3sh
**Prerequisite:** AG302
Presents the views of authoritative professional organizations as to desirable standards of accounting and reporting for governmental and nonprofit entities. Topics include budgeting and budgetary accounts, accounting for various funds, the general fixed assets group of accounts, the financial reporting process, and application of the principles of fund accounting in specific areas.

**AG451 Seminar in Accounting Standards** 3c-0l-3sh
**Prerequisite: AG302**
Study of professional standards having authoritative support in the field of accounting. APB opinions, FASB interpretations, and SEC Accounting Series Releases are discussed.

**AG461 Accounting Systems** 3c-0l-3sh
**Prerequisites:** AG302, AG311, IM300
Study of concepts, principles, and procedures of accounting system design, installation, implementation, auditing, and maintenance in relating to system objectives, information requirements, constraints, system elements, and considerations on a computerized basis.

**AG471 International Accounting** 3c-0l-3sh
**Prerequisites:** AG311 for Accounting majors or AG300 for non-Accounting majors
A comparative study of the effects of differences in cultural and business philosophies on national and international accounting policies. Specific financial accounting controversies, such as accounting for transactions involving foreign currency exchanges, will be discussed. International management accounting topics will include international transfer pricing policies, performance evaluations of multinational managers and divisions, and management information systems. International aspects of financial planning, auditing, and taxation practices will also be reviewed.

**AG481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may he offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**AG482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**AG488 Internship in Accounting (Industrial and Government)** 6sh
**Prerequisites:** Consent of departmental chairperson and dean, Eberly College of Business; overall GPA of 2.75 and GPA in accounting courses of 3.0
Practical experiences, generally totaling 400 hours, in an industrial or government accounting setting.

**AG493 Internship in Accounting (Public)** 6sh
**Prerequisite:** Consent of departmental chairperson and dean, Eberly College of Business; overall GPA of 3.00 and GPA in accounting courses of 3.0
Practical experiences, generally totaling 400 hours, with a public accounting firm.

## Art History
Department of Art
College of Fine Arts

**AH101 Introduction to Art** 3c-0l-3sh
Designed to introduce the student to the significance of art as related to contemporary living and our historical heritage.

**AH205 Ancient to Medieval Art** 3c-0l-3sh
Study of art from prehistoric times to the Middle Ages. Man's artistic development is seen in relation to political, social, economic, and religious events. Course was offered as AH115 prior to Summer, 1990.

**AH206 Renaissance to Baroque Art** 3c-0l-3sh
Study of art from the Renaissance to the Baroque in light of the historical events which affect man's artistic impulses and development. Course was offered as AH116 prior to Summer, 1990.

**AH211 Modern Art** 3c-0l-3sh
A survey of the revolutionary movements which began about 1850; concludes with trends in contemporary arts.

**AH222 Art in America** 3c-0l-3sh
Surveys American art and its relation to the development of American ideas and ideals.

**AH281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**AH300 Native American Art** 3c-0l-3sh
**Prerequisites:** AH101, junior standing, or permission
A survey of the broad forms of visual arts and crafts that reflects the lifeways of Native Americans from paleo-indian origins to A.D. 1900. (pending Council of Trustees approval)

**AH407 Medieval Art** 3c-0l-3sh
Art and architecture of Europe during the Middle Ages, beginning with early Christian and Byzantine and concluding with the Gothic period. Dual listed for graduate credit as AH507.

**AH408 Italian Renaissance Art** 3c-0l-3sh
Italian art from 1400s through 1650 and Mannerist movement. Special attention paid to great masters of the period. Dual listed for graduate credit as AH508.

**AH409 Baroque and Rococo Art** 3c-0l-3sh
A general survey of art from 1575-1775, will include architecture, sculpture, painting, and other arts. Dual listed for graduate credit as AH509.

**AH412 Classical Art** 3c-0l-3sh
Historical survey of the architecture, painting, sculpture, and minor arts of the classical period of Greece and Rome, including the Minoan, Mycenaean, and Etruscan cultures.

**AH413 Senior Seminar** 3c-0l-3sh
Intended to help students develop adequate vocabularies and methods to be used in discussion and criticism of works of art.

**AH416 Northern Renaissance Art** 3c-0l-3sh
Explores phenomena of art north of the Alps from 1400 to 1600, especially as it appears in the Lowlands, as well as side explorations into art of France, Germany, Austria, and the court at Prague.

**AH481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 181 are primarily for upper-level undergraduate students.

**AH482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## Applied Music
Department of Music
College of Fine Arts

Music majors and others who may qualify take private instruction in their respective major areas of performance in instrument or voice for up to eight semesters. Half-hour lessons are given each week (2 sh) for students enrolled in the B.S. and B.A. degree programs. A one-hour lesson (4 sh) is scheduled by students enrolled in the B.F.A. degree program only.

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| AM 101, 151, 201, 251, 301, 351, 401, 451 | Piano I-VIII |
| AM 102, 152, 202, 252, 302, 352, 402, 452 | Organ I-VIII |
| AM 103, 153, 203, 253, 303, 353, 403, 453 | Harpsichord I-VIII |
| AM 104, 154, 204, 254, 304, 354, 404, 454 | Harp I-VIII |
| AM 105, 155, 205, 255, 305, 355, 405, 455 | Voice I-VIII |
| AM 106, 156, 206, 256, 306, 356, 406, 456 | Violin I-VIII |
| AM 107, 157, 207, 257, 307, 357, 407, 457 | Viola I-VIII |
| AM 108, 158, 208, 258, 308, 358, 408, 458 | Cello I-VIII |
| AM 109, 159, 209, 259, 309, 359, 409, 459 | String Bass I-VIII |
| AM 110, 160, 210, 260, 310, 360, 410, 460 | Flute I-VIII |
| AM 111, 161, 211, 261, 311, 361, 411, 461 | Clarinet I-VIII |
| AM 112, 162, 212, 262, 312, 362, 412, 462 | Oboe I-VIII |
| AM 113, 163, 213, 263, 313, 363, 413, 463 | Bassoon I-VIII |
| AM 114, 164, 214, 264, 314, 364, 414, 464 | Saxophone I-VIII |
| AM 115, 165, 215, 265, 315, 365, 415, 465 | Trumpet I-VIII |
| AM 116, 166, 216, 266, 316, 366, 416, 466 | French Horn I-VIII |
| AM 117, 167, 217, 267, 317, 367, 417, 467 | Trombone I-VIII |
| AM 118, 168, 218, 268, 318, 368, 418, 468 | Baritone Horn I VIII |
| AM 119, 169, 219, 269, 319, 369, 419, 469 | Tuba I-VIII |
| AM 120, 170, 220, 270, 320, 370, 420, 470 | Percussion I-VIII |
| AM 121, 171, 221, 271, 321, 371, 421, 471 | Guitar I-VIII |

**AM482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

# Anthropology

Department of Anthropology
College of Humanities and Social Sciences

**AN110 Contemporary Anthropology** 3c-0l-3sh
An introduction to the nature of anthropological inquiry. By using the anthropological perspective, current relevant topics will be discussed. Topics could include but are not limited to changing myths and rituals, legal anthropology, cross-cultural aspects of aging, gender roles, evolutionism and creationism, cultural extinction, and world hunger.

**AN211 Cultural Anthropology** 3c-0l-3sh
Explores the nature of culture as a human survival technique. Provides a framework for appreciation and understanding of cultural differences and similarities in human societies, past and present.

**AN213 World Archaeology** 3c-0l-3sh
Survey of the prehistory of Western and non-Western cultures with emphasis on the development of technology and on the evolution of adaptive strategies with particular attention to the origins of agriculture. This course exposes the students to the diversity of past cultural systems and to the methodological and theoretical questions of concern to archaeologists.

**AN222 Biological Anthropology** 3c-0l-3sh
Introduction to the goals and techniques of biological anthropology with emphasis on primatology, paleoanthropology, genetics, and osteology. Provides a basis for evaluating the role of biology in human behavior.

**AN233 Language and Culture** 3c-0l-3sh
Focuses on social and cultural functions of language. Particular emphasis given to problems in anthropology with respect to non-Western languages.

**AN244 Basic Archaeology** 3c-0l-3sh
Introduction to the goals and methods of anthropological archaeology with particular attention to the analysis of cultural chronology, past lifeways, and cultural process. Provides laboratory experience with artifacts and other archaeological data.

**AN271 Cultural Area Studies: Africa** 3c-0l-3sh
Explores the cultural diversity of the continent of Africa. The first unit examines the historical processes which shape modern society, including the formation of indigenous African empires, the evidence for trade routes, slave trading, and colonialism. The second unit examines the nature of African traditional societies, including analyses of forager and agricultural groups. The last unit covers issues of contemporary development in Africa such as famine and agricultural policy, the status of women in economic development, and apartheid. Reading includes ethnographic and historical accounts of African society as well as selections by African writers on the issues of contemporary society. (Also offered as SO271; may not be taken for duplicate credit.)

**AN272 Cultural Area Studies: China** 3c-0l-3sh
Designed to assist the student in developing an understanding of contemporary China. While the course will begin with prehistoric and historic aspects of China, the focus will be on contemporary issues presented in the context of anthropological theory. Specific Chinese cultural components that will be investigated include values, attitudes, norms, social organization, linguistics, and folklore. (Also offered as SO272; may not be taken for duplicate credit.)

**AN273 Cultural Area Studies: Southeast Asia** 3c-0l-3sh
An introduction to the peoples and cultures of Southeast (SE) Asia. Prehistory and the development of indigenous states in SE Asia and analysis of impact of world religions, such as Islam, and Western colonialism. Also examines modern hunter-gatherer and farming societies and discusses contemporary issues in social and economic change, including the Green Revolution, tropical deforestation, the struggle of ethnic minority tribal peoples, and the plight of Indochinese refugees. (Also offered as SO273; may not be taken for duplicate credit.)

**AN274 Cultural Area Studies: Latin America** 3c-0l-3sh
An introduction to the peoples and cultures of Latin America. Focuses on the prehistory and development of pre-Columbian complex societies in Mesoamerica and the Andes and analyzes the impact of European colonialism on these major regions. Also examines contemporary issues, such as civil wars, economic development, rural-urban migrations, and migration and immigration of Latin American peoples into the United States. (Also offered as SO274; may not be taken for duplicate credit.)

**AN281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**AN286 Marriage, Kinship, and the Family** 3c-0l-3sh
Sociological and anthropological study of patterns of marriage, kinship, and family life, with emphasis on the relationship between family patterns and other social institutions. Topics covered include the family and marriage in historical and comparative perspective; worldwide patterns of gender stratification; incest and incest avoidance; class and race contexts of family patterns; mate selection and love; parenthood and child rearing; domestic and sexual violence; alternative family lifestyles; and the current crisis and possible future of the family. Intended for a broad audience but also open to sociology and anthropology majors and minors. (Also offered as SO286; may not be taken for duplicate credit.)

**AN314 Native Americans** 3c-0l-3sh
Survey of culture history and culture area characteristics of the Indians of North America. Detailed study of representative groups related to historical, functional, and ecological concepts.

**AN315 North American Archaeology** 3c-0l-3sh
**Prerequisite:** AN110 or 244 or permission of the instructor
Survey of North American prehistory with emphasis on cultural ecology and technology. Attention is given to all geographic areas north of Mexico, but the focus is on the Eastern Woodlands.

**AN316 Anthropology of Religion** 3c-0l-3sh
**Prerequisite:** AN110 or 211
Explores nature, function, and universal characteristics of religion in human society by utilizing cross-cultural approach. Theories concerning religious phenomena serve as topics for discussion.

**AN317 Archaeology Research Design and Analysis** 3c-0l-3sh
**Prerequisite:** AN244 or permission of the instructor
Introduction to theory and method in archaeological research through lecture, laboratory exercises, and individual projects. Provides students with actual experience analyzing and interpreting archaeological data sets.

**AN318 Museum Methods** 3c-0l-3sh
**Prerequisite: AN110 or 211 or 244**
Lecture and laboratory course surveying the role of museums as social and educational institutions, types of museums, museum administration, and museum architecture. Procedures for collection, curation, preservation, and storage of anthropological and natural history specimens examined.

**AN320 Archaeological Field School** var-6sh
**Prerequisite:** AN110, 244, or permission of instructor
Introduction to archaeological survey, field excavation, and laboratory processing. Field school students participate in one or more of the on-going research projects of the IUP Archaeology Program.

**AN340 Anthropology of Aging** 3c-0l-3sh
Introduces the student to various experiences faced by elderly people in numerous world's societies. Explores the impact of such factors as ethnicity, nationality, race, and class and the processes of cultural change on the lives of people growing old. Comparative, cross-cultural perspectives will be stressed.

**AN350 Anthropology of Women** 3c-0l-3sh
Designed for any student with an interest in the lives of women around the world, regardless of whether or not he or she has a strong background in anthropology. Examines the social roles, rights, and responsibilities of women cross-culturally, viewing both women's productive (economic) functions as well as reproductive functions. Reading describes the position of women in technologically simple societies and addresses the comparative position of women in the industrialized socialist and capitalist countries. The central theme of the course is an examination of how the position of women has changed in the twentieth century.

**AN360 Applied Anthropology** 3c-0l-3sh
Applied anthropology focuses on the anthropologist as an agent of social change and bridges the gap between theories of cultural behavior and the policies which affect contemporary cultures. Examines the historical role of anthropologists in early public administration and then examines at length the work of contemporary applied anthropologists in programs of international economic development (health, agriculture, and education), in domestic human service planning and delivery, in cultural resource preservation, and in their role as advocates for unempowered minorities.

**AN365 Native North American Religions** 3c-0l-3sh
An introduction to the indigenous religions of North America and to the peoples who practice these rich and varied approaches to the sacred. This course not only examines major religious themes and dimensions (myth, ritual, ethics, etc.) but includes a historical perspective on North American Indian lifeways. This perspective involves discussion of the clash with Euro-American values and contemporary native religious responses to social crisis and change. (Also offered as RS365; may not be taken for duplicate credit)

**AN401 Social and Cultural Change** 3c-0l-3sh
**Prerequisite:** AN110 or SO151
Exploration of current theoretical perspectives on social and cultural change. Special attention given to planned change at the local or regional level.

**AN415 Cultural Resource Management** 3c-0l-3sh
**Prerequisite:** AN244 or consent of the instructor
Provides an understanding of how cultural resources are being preserved and managed under current American laws and regulations with particular emphasis on historic properties, such as historic buildings and archaeological sites. Case studies and field trips are incorporated so that students gain a thorough understanding of key problems and issues in historic preservation and cultural resource management.

**AN420 Cultural Ecology** 3c-0l-3sh
**Prerequisite:** AN110 or 211
Introduces the student to the field of ecological anthropology by exploring the concept of the ecosystem in relationship to varying human adaptive strategies. Illustrates the importance of understanding man-environment interactions both in studying the developing world and in investigating the past.

**AN444 Medical Anthropology** 3c-0l-3sh
**Prerequisite:** 9 credits in anthropology or permission
Focuses on the study of human confrontation with disease and illness and on the adaptive arrangements made by various human groups for dealing with these dangers. Health and disease are viewed from a broad array of micro and macro perspectives, e.g., evolutionary, ecological, and psychosocial. Designed for nursing and social work students as well as social and biological sciences students.

**AN456 Field Research Methods** 3c-0l-3sh
**Prerequisite:** 9 credits in anthropology
Examination of methods and practice of sociology and anthropology in the areas of qualitative and quantitative methods. Concentrates upon the development of field notes, interviewing techniques, participant observation, etc. Qualitative methods of sampling and analysis will include theoretical sampling and analytic induction. Brief background research into community, organizational, and group structure will also be emphasized.

**AN480 Anthropology Seminar** var-1-3sh
**Prerequisite:** 9 credits in anthropology or permission
A seminar approach to the integration of the fields of anthropology. Designed to assist the advanced student in understanding the nature of anthropology, the major theoretical issues, and the history of intellectual development.

**AN481 Special Topics in Anthropology** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**AN482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**AN483 Readings in Anthropology** var-1-3sh
Directed readings on special topics in anthropology. Instructor guides selection of readings.

**AN493 Internship in Anthropology** var-3-12sh
**Prerequisite:** Permission of the instructor
The course is designed to offer students practical experience in any of the specialized fields of anthropology (physical, social-cultural, archaeology, or linguistics). Each student develops objectives in consultation with a particular departmental faculty member who is supervising the internship. Detailed field notes and a major paper based on the experience are required.

# AR Art (Studio)
Department of Art
College of Fine Arts

**AR100 Arts of the Twentieth Century** 1c-3l-3sh
Designed to expand student response to visual, aural, and kinetic art forms of this century with special emphasis on recent decades. The course includes lecture, studio, and field experiences.

**AR111 Figure Drawing** 0c-6l-3sh
A foundation course in drawing, including a study of the structure of drawing and composition with a variety of media and subject matter.

**AR112 Fundamentals of Drawing** 0c-6l-3sh
A course which seeks to integrate basic principles and fundamentals of drawing and design.

**AR113 Three-Dimension Design** 0c-6l-3sh
Basic elements and principles of design are studied. A course in design in three dimensions.

**AR114 Color and Two-Dimensional Design** 0c-6l-3sh
Focuses on the consistent properties of color and the manner in which two-dimensional design can be organized. Specific attention is given to the complex interactions of color within two-dimensional design.

**AR120 Principles of Design** 0c-4l-2sh
Principles of design and color are studied and applied to a crafted object. Major emphasis on aesthetic quality inherent in designing with materials.

**AR211 Painting** 0c-6l-3sh
An introductory course in painting in which a variety of materials, techniques, and approaches are explored.

**AR213 Woodworking: Function and Form** 0c-6l-3sh
Involves the study of woodworking and furniture design as it relates to the individual designer-artist. Students will experience a formal background in both woodworking technique and the application of design.

**AR214 Ceramics** 0c-6l-3sh
A general introduction to the techniques and aesthetics of clay. The student will work both at the wheel and with hand building methods.

**AR215 Sculpture** 0c-6l-3sh
Introductory course in sculpture with emphasis on study of form as well as visualizing in the third dimension.

**AR216 Basic Metals** 0c-6l-3sh
Introduction to metal work with emphasis upon creation of functional and nonfunctional art objects. Approached from the viewpoint of beginner learning basic processes of metal fabrication.

**AR217 Printmaking** 0c-6l-3sh
Introduction to basic techniques of production of fine prints including work in relief, intaglio, lithograph, and serigraph processes.

**AR218 Graphic Design** 0c-6l-3sh
Students explore various techniques and their application to such commercial art projects as package design, trademark, and other design problems. Lettering is stressed, both instant type and hand lettering.

**AR219 Fibers** 0c-6l-3sh
Provides students with introductory working knowledge in design and execution of projects in non 4/harness loom weaving and related fabric areas. Other fiber techniques, including handmade paper, available for students to explore as desired.

**AR281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**AR421 Advanced Drawing** 0c-6l-3sh
**Prerequisites:** AR111 and 112
Designed to meet the needs of the student who has some background in the field. Problems of composition, two- and three-dimensional relationships, and surface are on an individual basis. (Offered as AR321 prior to 1994-95.)

**AR451 Advanced Woodworking: Function and Form** 0c-6l-3sh
**Prerequisite:** AR213
Offers advanced training and skills involving the study of contemporary furniture design and woodworking. Emphasis on a technical and aesthetic point of view.

**AR452 Advanced Ceramics** 0c-6l-3sh
**Prerequisite:** AR214
Continued exploration of the field of ceramic production, along with kiln firing and glaze formulation.

**AR453 Advanced Sculpture** 0c-6l-3sh
**Prerequisite:** AR215
Gives the student an opportunity to pursue independent study in sculpture. Materials and processes will be individually chosen and the work related to broadening concepts.

**AR454 Advanced Painting** 0c-6l-3sh
**Prerequisite:** AR211
Individual experimentation and exploration by the painter and investigation of the various technical approaches.

**AR455 Advanced Graphic Design** 0c-6l-3sh
**Prerequisite:** AR218
Stresses advanced techniques in layout and illustration. The student explores ideas, such as creation of trademarks and how products are designed. Layouts are analyzed as to their quality. Package design is studied.

**AR457 Advanced Printmaking** 0c-6l-3sh
**Prerequisite:** AR217
Student elects to study one of the printmaking processes in greater depth and works toward development of own techniques, working processes, and ideas.

**AR459 Advanced Fibers** 0c-6l-3sh
**Prerequisite:** AR219
Provides student with a working knowledge in design and execution of projects in weaving and related areas. Other fiber techniques, including handmade paper, will be available for the students to explore as desired.

**AR460 Advanced Metals** 0c-6l-3sh
**Prerequisite:** AR216
Design and processes associated with art of metal are given greater concentration. The developing artist is encouraged to investigate, in depth, one or more of the metal arts as an extension of the basic course.

**AR481 Special Topics** var-1-3sh
May provide an in-depth study of a narrowly defined area of the discipline. Subject matter may change with repeated offering of the course. May be repeated for credit.

**AR482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**AR493 Internship** var-3-12sh
Designed for art majors who wish to receive practical experience working within professional situations which relate to the student's artistic and occupational goals.

## BC Biochemistry
Biochemistry Program
College of Natural Sciences and Mathematics

**BC301 Biochemistry I** 3c-0l-3sh
**Prerequisites:** BI105 and CH232
Introduction to biochemistry emphasizing the structure and function relationships of proteins, enzymes, and vitamins; bioenergetics; and the metabolism of carbohydrates and lipids.

**BC302 Biochemistry II** 3c-0l-3sh
**Prerequisite:** BC301
Continuation of BC301 concerning the metabolism of nitrogen, amino acids, nucleotides, and nucleic acids and the function of cell membranes, hormones, and specialized tissues.

**BC311 Biochemistry Laboratory I** 0c-4l-1sh
**Prerequisites:** BI105 and CH232
A companion to BC301 including experiments in photometry, enzyme kinetics and purification, lipid isolation and characterization, electron transport in respiration and photosynthesis, and use of radioisotopes.

**BC312 Biochemistry Laboratory II** 0c-4l-1sh
**Prerequisite:** BC311
A companion to BC302 including experiments in membrane characterization, properties of amino acids, isolation and function of nucleic acids, and synthesis of proteins and nucleic acids.

**BC480 Biochemistry Seminar I** 1c-0l-1sh
**Prerequisites:** BC302 and 312
Discussion of recent trends in biochemical thought. Oral and written reports on assigned readings, library or laboratory research. Guest lecturers. The combination BC480 and BC490 counts as one writing-intensive course.

**BC481 Special Topics in Biochemistry** var-1-3sh
**Prerequisites:** BC302 or CH351
A lecture-discussion course of recent biochemical topics or those of unique interest. Topic and instructor to change annually.

**BC482 Independent Research in Biochemistry** var-1-3sh
**Prerequisites:** BC302 and 312, permission by program coordinator
Student conducts a research project in any area of biochemistry. Work supervised by faculty. Does not involve regular class or lab hours. Enrollment by permission only.

**BC490 Biochemistry Seminar II** 1c-0l-1sh
**Prerequisites:** BC302, 312, and 480
Discussion of recent trends in biochemical thought. Oral and written reports on assigned readings, library or laboratory research. Guest lecturers. The combination BC480 and BC490 counts as one writing-intensive course.

## BE Business Education
Department of Office Systems and Business Education
Eberly College of Business

**Note:** All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

**BE101 Microbased Computer Literacy** 3c-0l-3sh
An introductory course designed to provide students with a fundamental understanding of computers. The course familiarizes students with the interaction of computer hardware and software. Emphasis is placed on the application of microcomputers, the use of productivity software (word processing, spreadsheet management, file and data base management), and the social and ethical aspects of the impact of computers on society.
Note: This course is cross-listed as CO101 and IM101. Any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

**BE111 Foundations of Business Mathematics** 3c-0l-3sh
Develops an understanding of numbers and knowledge of fundamental concepts in arithmetic and algebra in the solution of common and advanced problems encountered in business by the businessperson and consumer. Topics illustrating and emphasizing the application of business mathematics include methods used to compute interest discount, partial payments, discounting of notes and drafts, depreciation, amortization, sinking fund redemptions, effective rate of interest, and preparation of statistical data.

**BE131 Keyboarding and Document Formatting** 3c-0l-2sh
Emphasis on development of correct techniques in typewriting, introduction to basic styles of business letters, simple tabulations, and simple manuscripts; specific standards of speed and accuracy are required.

**BE132 Computer Keyboarding and Formatting** 3c-0l-3sh
Prerequisite: BE131 or by exam
Emphasis on the development of speed, accuracy, and production ability; includes use of microcomputers, business letters with special features, business reports, business forms, rough drafts, and manuscripts.

**BE134 Keyboarding** 1c-0l-1sh
**Exception:** This course is open to students in all colleges without restriction.
A class designed to provide students with the fundamental skills to keyboard information quickly and accurately in fourteen one-hour sessions. It is intended for the student who does not require the additional skills included in keyboarding and document formatting, such as letter formats, manuscript typing, and tabulation. Recommended for students in computer science, journalism, management information systems, criminology, etc.

**BE201 Internet and Multimedia** 3c-0l-3sh
**Prerequisite:** BE,CM,CO,IM 101 or prior exposure to word processing and electronic mail
The major focus will be on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. This information literacy course is designed for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students will learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BE,CM,CO,IM,LB 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.)

**BE250 Electronic Office Procedures** 3c-0l-3sh
**Prerequisite:** BE131 or equivalent
A study of the theory and practice of the systems in an electronic office: records management, office environment, communication transmittal systems, reprographics, and office procedures. May not be used as a substitute for BE264.

**BE260 Alphabetic Shorthand Theory** 3c-0l-3sh
Basic principles of alphabetic shorthand with emphasis on mastery of shorthand theory, punctuation, grammar, and spelling. New matter dictation will be introduced during the last few weeks of class. The alphabetic system taught will vary. (Offered only on an occasional basis)

**BE261 Shorthand Theory** 3c-0l-3sh
An introductory course in the basic principles of Gregg Shorthand, Centennial Edition. (Offered only on an occasional basis)

**BE264 Office Procedures** 3c-0l-3sh
**Prerequisite:** BE131 or equivalent
Advanced study of theory and practice in activities common to office records management; handling of mail; telephone and telegraph services; receiving callers; writing reports; dictation and transcription equipment; bank, financial, and legal transactions; shipping and receiving services; reference books; etc.

**BE273 Word Processing Applications** 3c-0l-3sh
**Prerequisite:** BE131 or equivalent
In this course students will develop a high degree of proficiency in the use of word processors. Emphasis is on machine operations and production skills in formatting, text editing, and understanding word processing concepts. May not be used as a substitute for BE,CO,IM101.

**BE281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**BE311 Methods and Evaluation in Business and Marketing Education I** 3c-0l-3sh
**Prerequisites:** PC101, EP202, and completion of the freshman and sophomore courses in the student's major areas
Includes general methods of teaching and evaluation plus methods and evaluation in basic business courses. Unit plans, lesson plans, and unit tests are emphasized. Techniques and procedures of teaching and classroom management are studied. Includes units in vocational education such as advisory committees, adult education, and federal legislation for funding.

**BE312 Methods and Evaluation in Business Education II** var-1-3sh
**Prerequisite:** BE311
Covers three sections of special methods and evaluation in office technologies: secretarial, accounting, and data processing. Objectives, planning, evaluating, and skill building are studied. Media and facilities for instruction are examined. Students elect sections needed for certification.

**BE481 Special Topics** var-1-3sh
Prerequisite: As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**BE482 Independent Study** var-1-3sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## BI Biology
Department of Biology
College of Natural Sciences and Mathematics

**BI103 General Biology I** 3c-2l-4sh
Prerequisite: Non-Biology majors only
A basic introduction to ecology, biochemistry, and cell biology, genetics, and evolution.

**BI104 General Biology II** 3c-2l-4sh
Prerequisites: BI103, non-Biology majors only
A basic introduction to plant and animal physiology, neurobiology, animal behavior, and plant and animal reproduction and development.

**BI105 Cell Biology** 3c-0l-3sh
**Prerequisite:** Non-Biology majors only
An introductory course to provide concepts and applications for understanding human biological function from the point of view of cellular biology.

**BI110 Plant Biology** 3c-4l-5sh
**Prerequisite:** BI105 or special permission
Plant structure, function, development, recognition and grouping, environmental relationships, and economic importance of plants considered.

**BI111 Principles of Biology I** 3c-3l-4sh
**Prerequisite:** Must be taken after or concurrent with CH111
Introduces the student to principles of biology, specifically in the topics of cell structure and function, genetics, and physiology. Develops skills in the use of the scientific method. Designed for biology majors.

**BI112 Principles of Biology II** 3c-3l-4sh
**Prerequisite:** BI111
Introduces the student to principles of biology, specifically in the topics of reproduction, development, evolution, ecology, and animal behavior. Develops skill in the use of the scientific method. Designed for biology majors.

**BI114 Environmental Science** 3c-0l-3sh
**Prerequisite:** Non-Biology majors only
An introduction to environmental science with an emphasis on human impacts. The course uses an interdisciplinary approach to the consideration of population growth, pollution, preservation of species, and establishment of public policy. Students will learn basic principles in ecology as the basis for understanding problems of the environment.

**BI115 Biotic Diversity of North America** 3c-0l-3sh
**Prerequisites:** Non-Biology majors and non-Biology minors only
An introduction to the biological diversity of North America from Barrow, Alaska, to Tehuantepec, Mexico. All major aquatic and terrestrial biomes occurring in North America will be examined with regard to plant forms, animal composition, and environmental (abiotic) conditions.

**BI120 Animal Biology** 3c-4l-5sh
**Prerequisite:** BI105 or special permission
Morphology, physiology, embryology, ecology, taxonomy, social, and economic importance of animals; consideration of principles applicable to a correlation of classical with present-day zoology.

**BI150 Human Anatomy** 2c-3l-3sh
**Prerequisite:** Non-Biology majors only
Study of the functional systematic anatomy of the human. Lab studies center on nonhuman mammals whose anatomy is then related to the human condition.

**BI151 Human Physiology** 3c-2l-4sh
**Prerequisites:** BI105, non-Biology majors only
Course deals with acquiring, through lecture presentations and laboratory experiments, an understanding of the basic functions and control of the major organ systems of the human body. Organ systems examined include the following: muscular system, cardiovascular system, respiratory system, endocrine system, renal system, digestive system, reproductive system, and nervous system.

**BI155 Human Physiology and Anatomy** 3c-3l-4sh
**Prerequisite:** Non-Biology majors only (Food and Nutrition, Dietetics, Family and Consumer Sciences Education, Physical Education, and Safety Sciences majors)
Study of structure and function of the human body. Emphasis is on normal function, with particular attention to functional anatomy, control mechanisms, and interrelationships among systems. Laboratory studies will include experimentation and dissection. For students with little or no science background.

**BI210 Botany** 2c-3l-3sh
**Prerequisite:** BI111-112, or permission of instructor
A survey of the major plant groups, their physiology, structure, life cycles, evolution and ecology, and economic roles of plants. Combined lecture-laboratory.

**BI220 General Zoology** 2c-3l-3sh
**Prerequisite:** BI111-112 or permission of instructor
Examination of the evolution, form, and function of all major animal phyla, from sponges through chordates. Interactive lecture-laboratory sessions follow a phylogenetic approach to the Animal Kingdom and incorporate essentials of animal ecology, physiology, functional morphology, and behavior.

**BI232 Fundamentals of Microbiology** 2c-3l-3sh
**Prerequisites:** CH101 or equivalent, non-Biology majors only (Food and Nutrition, Dietetics, Family and Consumer Sciences Education, and Hotel, Restaurant, and Institutional Management majors)
Study of microorganisms and the role they play in water, food disease, and infection. Food spoilage, poisoning, and disease are emphasized. General methods and techniques are emphasized in the laboratory.

**BI241 General Microbiology** 2c-3l-3sh
**Prerequisites:** Non-Biology majors only (Environmental Health, Nursing and Respiratory Therapy majors), BI105, CH101, or equivalent
Study of microorganisms and the role they play in water, soil, food, and infection. Microbes and disease will be emphasized. Standard methods and techniques are emphasized in laboratory.

**BI250 Principles of Microbiology** 2c-3l-3sh
**Prerequisite:** BI111-112 or permission of instructor
Study of the structure, nutrition, and biochemical activities of microbes. Survey of viruses, blue-green bacteria, bacteria, algae, fungi, and protozoa and their diversity in natural environments. Course designed for biology and biology education majors.

**BI251 Field Botany** 2c-3l-3sh
**Prerequisites:** BI210
The collection, preservation, identification, and distribution of selected herbaceous and woody plants of Western Pennsylvania. Emphasis on taxonomic principles, the use of keys and manuals, and the recognition of local flora.

**BI252 Field Zoology** 2c-3l-3sh
**Prerequisite:** BI220
Field natural history of vertebrates; identification, collection, and preservation techniques.

**BI261 Ornithology** 2c-3l-3sh
**Prerequisites:** BI111-112 or BI103-104
A study of birds of the region. Indoor laboratory as well as early morning and possibly weekend field trips required.

**BI262 General Entomology** 2c-3l-3sh
**Prerequisite:** BI220
Morphology, anatomy, ecology, taxonomy, and economic and public health importance of insect orders, particularly those of Western Pennsylvania; student collection and field trips required.

**BI263 Genetics** 2c-3l-3sh
**Prerequisite:** BI111
Deals with the distribution and function of the hereditary material; special emphasis on microbial, viral, and molecular genetics.

**BI269 Bioethics and Coevolution** 3c-0l-3sh
Discussion and exploration of the coevolution of man and nature. Areas covered include the concepts of coevolution, bioethics, resource utilization, and possible future lifestyles. Designed for majors and nonmajors.

**BI271 Evolution** 3c-0l-3sh
**Prerequisite:** BI111-112 or BI103-104, BI263
Historical development of evolutionary thought; evidence and operational mechanisms involved; origin and phylogenetic relationships of biological groups.

**BI272 Conservation of Plant and Animal Resources** 2c-3l-3sh
**Prerequisites:** BI111-112 or BI103-104
A study of accepted practices in soil, water, forest, and wildlife conservation. Saturday field trips.

**BI281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**BI310 Applied Entomology and Zoonoses** 2c-3l-3sh
**Prerequisite:** BI220 or permission
Study of the measures for abatement or control of arthropods, rodents, birds, and other disease vectors of public importance: selection, chemistry, formulation, and safe application of insecticides, rodenticides, and fumigants; pesticiding equipment; application of biological and other measures of control.

**BI311 Environmental Biology** 3c-3l-4sh
**Prerequisites:** Restricted to Elementary Education and Earth Science Education majors only
Laboratory and field course providing basic knowledge in biology and its practical implications. Physical and biological aspects of the environment are studied.

**BI321 Environmental Protection I** 2c-3l-3sh
**Prerequisites:** BI111- 112, CH112, Environmental Health majors only or permission of instructor
Considers the impact of important components of the physical environment on health and deals with principles and methods for identification, evaluation, and control of such health hazards. Major attention to principles and methods of epidemiological investigation. Major credit only for Environmental Health majors.

**BI322 Environmental Protection II** 2c-3l-3sh
**Prerequisites:** BI111- 112, CH112, Environmental Health majors only or permission of instructor
Subjects receiving attention include water and food supplies, domestic and industrial sewage and wastes, housing, accidents, community air pollution, domestic and industrial poisons, ionizing radiations, occupational health hazards.

**BI331 Animal Developmental Biology** 2c-3l-3sh
**Prerequisite:** BI220 or by permission
Comparative and molecular development of vertebrate animals are the major considerations. General principles of development are illustrated using vertebrate, invertebrate, and plant materials.

**BI350 Cellular Physiology** 2c-3l-3sh
**Prerequisites:** BI111, CH231
Topics include cell membrane systems, bioenergetics, and information processing systems as well as growth and differentiation of cells and their organelles. Complements plant and animal physiology and biochemistry.

**BI352 Comparative Animal Physiology** 2c-3l-3sh
**Prerequisites:** BI220, CH231
Comparative study of homeostatic mechanisms and systems in animals and their relation to fundamental chemical and physical events in cells.

**BI360 Medical Mycology** 2c-3l-3sh
**Prerequisite:** BI111-112
A study of the mycology of pathogenic fungi. Consideration will include sources of infection, distribution, symptomatology, diagnosis, prognosis, immunology, and treatment. Pathogens are used in the course, and emphasis is placed upon actual laboratory technique and procedures.

**BI361 Microbiology** 2c-3l-3sh
**Prerequisites:** BI105, CH231
Introduction to morphology, physiology, and ecology of procaryotic organisms. Importance of microorganisms in basic and applied research, economics, infection, and immunology are discussed.

**BI362 Ecology** 2c-3l-3sh
**Prerequisites:** BI111-112, BI210 or BI220
Study of interrelations and adaptations of organisms; includes consideration of physical and biotic environmental factors. Field trips.

**BI363 Medical Microbiology** 2c-3l-3sh
**Prerequisites:** BI250 or permission
Study of disease caused by microorganisms with emphasis on human pathogens. Both epidemiology and aspects of host-parasite relationships will be discussed. Lab stresses methods of isolation and identification of pathogens.

**BI364 Immunology** 2c-3l-3sh
**Prerequisites:** BI250, CH232, or by permission
Physical and chemical properties of antigens and antibodies; nature of antigen-antibody interactions; mechanism of antibody formation; and immune reaction and disease. Lab employs serological techniques.

**BI401 Laboratory Methods in Biology and Biotechnology** 2c-4l-3sh
**Prerequisite:** CH351
Theory and practice in a number of major analytical and preparative techniques currently in use in physiology, molecular biology, and biotechnology.

**BI420 Biology of Higher Invertebrates** 2c-3l-3sh
**Prerequisite:** BI220
A phylogenetic overview of the higher invertebrates. Annelida through lower Chordata. A systematic approach on functional morphology and microstructure, behavior and physiology, under an evolutionary umbrella. Laboratory sessions offer additional research opportunities.

**BI425 Herpetology** 2c-3l-3sh
**Prerequisite:** BI220
A comprehensive survey of the classes Amphibia and Reptilia, including their classification, structure, origin, evolution, phylogenetic relationships, distribution, and natural history. Special emphasis is placed on the herpetofauna of Pennsylvania.

**BI432 Comparative Vertebrate Anatomy** 2c-3l-3sh
**Prerequisite: BI220**
Discussion of anatomy of representative vertebrates from a comparative point of view. Stresses major organizational changes observed in vertebrate history.

**BI450 Pymatuning: Field Studies** var-3sh
During the summer session, various field courses are offered through the Pymatuning Laboratory of Ecology. The offerings will vary depending on the summer. Some of the possible offerings include Experimental Design, Fish Ecology, Behavioral Ecology, Aquatic Botany, and Ecological Genetics. Information regarding specific offerings available from Biology Department in spring.

**BI453 Plant Physiology** 2c-3l-3sh
Prerequisites: BI210, CH231
Studies physiological processes occurring in plants considered in relation to growth, development, and ecology of plants.

**BI463 Limnology** 2c-3l-3sh
**Prerequisite:** BI362
An investigation into the physical, chemical, and biological aspects of inland waters and their interrelationships. In the laboratory the student will gain experience in the techniques involved in aquatic sampling and the analysis of data. (Saturday or Sunday labs may be required.)

**BI466 Principles of Virology** 3c-0l-3sh
**Prerequisite:** BI263 or equivalent course in Genetics, or CH351 or equivalent course in Biochemistry, or permission of instructor
Topics include structure, classification, assay, and transmission of viruses; methods used in the study of viruses; viral replication, gene expression, and gene regulation; host-viral interactions and subviral pathogens.

**BI475 Mammalogy** 2c-3l-3sh
**Prerequisite:** BI220
A general discussion of mammals emphasizing systematics, distribution, and structural and functional modifications related to evolution of this group. Lab work samples numerous techniques that can be applied to mammalian biology.

**BI476 Parasitology** 2c-3l-3sh
**Prerequisite:** BI220
Structure, physiology, ecology, life cycles, pathology, and treatment of parasitic protozoa and flatworm and roundworm species of man. Dissection of hosts for parasites.

**BI478 Mycology** 2c-3l-3sh
**Prerequisite:** BI210
Involves a study of the systemics, morphology, and physiology of the kingdom Myceteae with emphasis on economically important and experimentally useful organisms.

**BI480 Biology Seminar** 1c-0l-1sh
Discussion of recent trends in biological thought and research. Students report on assigned readings and/or personal research.

**BI481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
This course varies from semester to semester covering diverse topics in specific areas of biology.

**BI482 Independent Study** var-1-3sh
**Prerequisites:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office. A 2.5 GPA overall and in maj-es required.
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. Work is supervised by a faculty member but does not involve regular class or laboratory hours.

**BI493 Biology Internship** var-6-12sh
**Prerequisites:** Biology major with at least 57 semester hours, 2.5 overall QPA, and permission of the director of internships and the chairperson
Selected students have opportunity, under department supervision, to gain off-campus practical experience in area of interest. Only six credits may be applied toward major; total number of credits will be decided in consultation involving

## Business Law
Department of Finance and Legal Studies
Eberly College of Business

**Note:** All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

**BL235 Introduction to Business Law** 3c-0l-3sh
Introduction to legal systems, torts, contracts, and sales law.

**BL281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**BL336 Law of Business Organizations** 3c-0l-3sh
**Prerequisite:** BL235
A study of the law dealing with commercial paper, agency, partnerships, corporations, and bankruptcy.

**BL337 Consumer Law** 3c-0l-3sh
Nature of law as it pertains to the consumer. Attention to consumer protection relationships; real and personal property; credit; environmental law; law pertaining to employment; landlord-tenant relationships; product liability; insurance; and family law.

**BL382 Real Estate Fundamentals** 3c-0l-3sh
Designed to acquaint the student with the language, principles, and laws that govern the business of real estate. Emphasis on the underlying concepts of land, property, rights in realty, and the means, methods, and laws that govern the conveyance of these rights. Required course for taking the Pennsylvania Real Estate Sales Exam.

**BL383 Real Estate Practice** 3c-0l-3sh
**Prerequisite:** BL382
One of the two courses required by the Pennsylvania Real Estate Commission in order to take the Pennsylvania Real Estate Sales Licensing Exam. Topics include real estate brokerage, the real estate market, listing contracts, the Pennsylvania Real Estate Licensing and Registration Act and its rules and regulations, appraisal, property management, fair housing laws, ethical practices for real estate professionals, and real estate math.

**BL440 Business Negotiations** 3c-0l-3sh
**Prerequisites:** BL235, junior standing
This course is open to all majors meeting the prerequisites. It covers the basic theories and strategies of negotiation in the business environment and provides instruction and practice to develop negotiation skills. The course focuses on the knowledge and skills needed in intercompany and intracompany negotiations. The course focuses on neither collective bargaining nor labor negotiations.

**BL481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**BL482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## CE Counselor Education
Department of Counselor Education
College of Education

**CE250 Developing Interpersonal Relationship Skills** 1c-01-1sh
Teaches interpersonal relationship skills: listening, communicating, group dynamics, decision making, leadership, assertiveness, time-use management, problem solving, and conflict resolution. Restricted to residence hall counselors.

**CE253 Counseling in School Settings** 3c-0l-3sh
An elective course designed to provide in-service teachers and school personnel, other than counselors, with a basic understanding of the knowledge, information, and skills appropriate to counseling with individuals and groups. Restricted to peer tutors.

**CE281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**CE481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**CE482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## CH Chemistry
Department of Chemistry
College of Natural Sciences and Mathematics

**CH101 College Chemistry I** 3c-2l-4sh
The basic principles and concepts of inorganic chemistry are developed from the standpoint of atomic and molecular structure with illustrative examples from descriptive chemistry. The laboratory portion of the course illustrates physical and chemical properties in a qualitative and quantitative manner. The course is designed for selected majors within the College of Health and Human Services.

**CH102 College Chemistry II** 3c-2l-4sh
**Prerequisite:** CH101
The basic fundamental principles and concepts of organic and biochemistry are developed. Deals primarily with structural features of organic compounds, the chemistry of functional groups, and practical examples and uses of organic compounds. The laboratory portion illustrates properties and reactions of representative organic compounds. The course is designed for selected majors within the College of Health and Human Services.

**CH111 General Chemistry I** 3c-3l-4sh
Lecture-discussion of principles of chemistry, including theory and applications. The lab illustrates principles discussed. Topics discussed include scientific measurements, simple definitions and concepts, the mole, stoichiometry, gas laws, electronic structure of the atom, bonding, thermochemistry, and descriptive chemistry of the elements.

**CH112 General Chemistry II** 3c-3l-4sh
**Prerequisite:** CH111
Continuation of General Chemistry I. Topics discussed include the solid and liquid state, solutions, kinetics, equilibria, acids and bases, solubility equilibria, thermodynamics, electrochemistry, and descriptive chemistry of the elements.

**CH113 Concepts in Chemistry** 3c-3l-4sh
Introductory course for chemistry majors. Topics covered include atomic theory, an introduction to chemical reactions, stoichiometry, thermochemistry, chemical bonding, molecular geometry, kinetic-molecular theory of gases, the liquid and the solid states, and solution theory.

**CH114 Basic Inorganic Chemistry** 3c-3l-4sh
**Prerequisite:** CH113
Topics include chemical kinetics, equilibrium and thermodynamics, acids and bases, electrochemistry, coordination chemistry, and descriptive chemistry of selected elements.

**CH116 Basic Inorganic Chemistry** 3c-3l-2sh
**Prerequisite:** CH111 and 112
Required for chemistry majors who have taken CH111 and 112. A systematic study of the chemistry of the elements will be presented in both the lecture and the laboratory. Also included will be the chemistry of coordination compounds. This course starts at the beginning of the second half of the spring semester and is taught concurrently with CH114.

**CH231 Organic Chemistry I** 3c-4l-4sh
**Prerequisite:** CH112 or 114
A study of compounds of carbon, with special emphasis on structure-reactivity relationships. Laboratory work emphasizes methods of separation and purification of organic compounds.

**CH232 Organic Chemistry II** 3c-4l-4sh
**Prerequisite:** CH231
A continuation of Organic Chemistry I with an introduction to spectroscopic techniques. Laboratory work emphasizes the synthesis of representative compounds.

**CH255 Biochemistry and Nutrition** 3c-0l-3sh
**Prerequisite:** CH102
Course for Home Economics majors; studies chemistry and biological function of biologically active compounds with respect to nutritional requirements.

**CH281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**CH301 Chemistry Seminar** 1c-0l-1sh
Discussion of current technical literature and current research problems of staff. Lectures by outside chemists and student presentations. Open to junior or senior chemistry majors and to others by permission of the chairperson.

**CH321 Quantitative Analysis** 3c-4l-4sh
**Prerequisite:** CH112 or 114
Theory and practice of quantitative analysis, including gravimetric and volumetric analysis; special emphasis on perfecting student's laboratory techniques and application of general chemical knowledge through problem solving.

**CH322 Instrumental Analysis** 3c-4l-4sh
**Prerequisite:** CH341
Modern instrumental methods of chemical analysis. Student learns theory behind the instrument, principles of operation, interpretation of data obtained, and limitations of methods.

**CH323 Analytical Methods** 3c-4l-4sh
**Prerequisites:** CH112 and non-Chemistry major
Principles of precipitation, acid-base, oxidation-reduction, and equilibria are applied to problem solving and to laboratory determinations; instrumental methods of analysis, such as colorimetry, atomic absorption and flame emission, gas chromatography, etc.

**CH331 Organic Molecular Structure Determination** 4c-var-3sh
**Prerequisites:** CH231-232 (CH232 may be taken concurrently)
Gives the student experience in systematic identification of various classes of organic compounds by both chemical and physical methods.

**CH335 Advanced Organic Chemistry** 3c-0l-3sh
**Prerequisites:** CH232 and 341
Selected topics of current interest covered. Possible topics include reaction mechanisms, molecular spectroscopy, stereochemistry, natural products, heterocyclics, polymer chemistry, and organic synthesis.

**CH340 Physical Chemistry for the Biological Sciences** 3c-0l-3sh
**Prerequisites:** MA122 or 124 or 128, and PY112 or 132; CH232
One-semester course for Biochemistry and Biology majors. Chemical thermodynamics, equilibria, kinetics; quantum mechanics; and spectroscopy especially as applied to biomechanical systems.

**CH341 Physical Chemistry I** 4c-0l-4sh
**Prerequisites:** MA122, 124, or 128 and PY112 or 132; CH112 or 114
Chemical thermodynamics with applications to solutions, phase, and chemical equilibria-kinetic theory.

**CH342 Physical Chemistry II** 3c-0l-3sh
**Prerequisite:** CH341
Study of solids, liquids, surfaces, chemical kinetics, electrochemistry, atomic and molecular structure.

**CH343 Physical Chemistry Laboratory I** 0c-3l-1sh
**Prerequisites:** CH321, 341
Experiments illustrating application of fundamental laws to actual systems. Carries writing-intensive credit.

**CH344 Physical Chemistry Laboratory II** 0c-3l-1sh
**Prerequisites:** CH342, 343
Extension of Physical Chemistry Laboratory I; experiments related to chemical kinetics, molecular spectroscopy, and other topics of physical chemistry.

**CH351 Biochemistry** 4c-0l-4sh
**Prerequisite:** CH231
Study of chemistry and biological functions of carbohydrates, lipids, proteins, minerals, vitamins, and hormones.

**CH410 Advanced Inorganic Chemistry Laboratory** 0c-3l-1sh
**Prerequisite:** CH322
A laboratory course in which the techniques used in the synthesis and characterization of inorganic compounds will be explored. Emphasis will be placed on the preparation of a wide variety of inorganic compounds and the methods by which they are identified and characterized.

**CH411 Advanced Inorganic Chemistry** 3c-0l-3sh
**Prerequisite:** CH341
Gives understanding of advanced theories of atomic structure, chemical bonding, acids and bases, coordination compounds, and selected topics.

**CH412 Advanced Structural and Synthetic Methods in Inorganic Chemistry** 2c-2l-3sh
**Prerequisites:** CH411 and either CH410 or 322
Advanced techniques used in the synthesis and characterization of inorganic compounds will be explored. In lecture, emphasis will be placed on the theory and application of structural and spectroscopic methods of characterization. In lab, emphasis will be placed on advanced methods of synthesis and structural characterization using representative examples of important classes of inorganic compounds.

**CH421 Advanced Instrumental Analysis** 1c-var-3sh
**Prerequisite:** CH322
Study of modern chemical analysis, using advanced instrumental techniques; emphasis on theory, principles of operation, capabilities, and limitations of advanced analytical instruments used.

**CH441 Advanced Physical Chemistry** 3c-0l-3sh
Prerequisite or corequisite: CH342
Study of fundamental ideas of quantum and statistical mechanics, molecular structure, and other topics of current interest.

**CH481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**CH482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**CH493 Internship in Chemistry** var-4-9sh
**Prerequisites:** CH113, 114, 231, 232, 321, 341, and departmental approval
Full-time involvement in an actual "on-the-job" situation in an industrial or research laboratory under the tutelage of a selected preceptor. A department faculty member will work closely with the student and preceptor and will assume responsibility for making the final evaluation and assigning a grade.

**CH498 Problems in Chemistry** var-1-2sh
**Prerequisite:** Permission of chairperson
Course of independent study on selected problems, including lab work, library reading, and conferences with staff member. A minimum of 4 hours per week

## Critical Languages
College of Humanities and Social Sciences

Critical Languages are offered in four levels. See program description in the opening section of the College of Humanities and Social Sciences. Specific languages are offered as available.

**CL101 - 120 Critical Languages I** 3c-0l-3sh
Basic vocabulary and pronunciation in the target language. Oral/aural skills are stressed.

| | |
|---|---|
| CL101 | Arabic I |
| CL102 | Chinese I |
| CL103 | Dutch I |
| CL104 | Finnish I |
| CL105 | Hindi I |
| CL106 | Hungarian I |
| CL107 | Italian I |
| CL108 | Japanese I |
| CL109 | Korean I |
| CL110 | Modern Greek I |
| CL111 | Portuguese I |
| CL112 | Russian I |
| CL113 | Swedish I |

**CL151 - 170 Critical Languages II** 3c-0l-3sh
**Prerequisite:** Level I or acceptable equivalent
A continuation of the first-semester course. Depending on the language being studied, reading and writing may be introduced at this level.

| | |
|---|---|
| CL151 | Arabic II |
| CL152 | Chinese II |
| CL153 | Dutch II |
| CL154 | Finnish II |
| CL155 | Hindi II |
| CL156 | Hungarian II |
| CL157 | Italian II |
| CL158 | Japanese II |
| CL159 | Korean II |
| CL160 | Modern Greek II |
| CL161 | Portuguese II |
| CL162 | Russian II |
| CL163 | Swedish II |

**CL 201 - 220 Critical Languages III** 3c-0l-3sh
**Prerequisite:** Level II or acceptable equivalent
At this first intermediate level, students will begin to develop a degree of oral proficiency that will vary with the language studied. Reading and writing will be studied in all languages by this level.

| | |
|---|---|
| CL201 | Arabic III |
| CL202 | Chinese III |
| CL203 | Dutch III |
| CL204 | Finnish III |
| CL205 | Hindi III |
| CL206 | Hungarian III |
| CL207 | Italian III |
| CL208 | Japanese III |
| CL209 | Korean III |
| CL210 | Modern Greek III |
| CL211 | Portuguese III |
| CL212 | Russian III |
| CL213 | Swedish III |

**CL 251 - 270 Critical Languages IV** 3c-0l-3sh
**Prerequisite:** Level III or acceptable equivalent
By the end of this course the student should be able to communicate in simple terms with an educated native speaker on a topic with which the student is familiar. Ability in reading and writing will vary with language.

| | |
|---|---|
| CL251 | Arabic IV |
| CL252 | Chinese IV |
| CL253 | Dutch IV |
| CL254 | Finnish IV |
| CL255 | Hindi IV |
| CL256 | Hungarian IV |
| CL257 | Italian IV |
| CL258 | Japanese IV |
| CL259 | Korean IV |
| CL260 | Modern Greek IV |
| CL261 | Portuguese IV |
| CL262 | Russian IV |
| CL263 | Swedish IV |

## CM Communications Media
Department of Communications Media
College of Education

**CM101 Communications Media in American Society** 3c-0l-3sh
Required of Communications Media majors
Introduction to the evolution, status, and future of communications media. Students explore intrapersonal communication through self-assessment, values clarification, and feedback; interpersonal communication through interviews, observations, case studies, and gaming; and mass communications through the examination of the processes and the technology utilized to disseminate and manage information. Career paths, field applications, professional associations, and the primary literature are investigated. (Previous title: Survey of Communications Media)

**CM200 Images** 3c-0l-3sh
**Prerequisite:** CM101
The course examines the basic visual and aural elements, the strategies and options of techniques, the psychological and physiological implications of creative composition, and the range of media and formats.

**CM201 Internet and Multimedia** 3c-0l-3sh
**Prerequisite:** BE/CM/CO/IM 101 or prior exposure to word processing and electronic mail
The major focus will be on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. This information literacy course is designed for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students will learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BE/CM/CO/IM/LB 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.)

**CM230 Issues in International Communication** 3c-0l-3sh
Survey of international communications with particular emphasis on communications flow, four-press theories, ownership, structure and access to media, government/media relationships, AND the impact of communications on developed and developing countries.

**CM271 Beginning Photography** 3c-0l-3sh
**Prerequisite:** CM101 or permission
Working with black-and-white materials, the student learns to operate a camera, develop film, make contact prints and enlargements, and mount prints for display. Ancillary topics are introduced such as filtration, print spotting, flash, and the use of accessory lenses. Student is required to have a 35mm camera, preferably a single-lens reflex, with fully manual focusing and exposure capability.

**CM281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**CM301 Technology for Learning and Instruction** 3c-0l-3sh
**Prerequisite:** EP202 or permission
Preservice teachers gain competencies in selection, evaluation, and utilization of various instructional technologies. Application of new technologies to teaching and learning will be emphasized, along with performance-based activities in instructional design. A major portion of the course is devoted to the integration of computer-based instructional activities in the school curriculum. Does not count towards credits needed for Communications Media major.

**CM303 Scriptwriting** 3c-0l-3sh
**Prerequisite:** CM101
Required of Communications Media majors
Introduction to the design of media materials and script writing. Style and techniques of writing will be analyzed. Classroom emphasis is on writing, critiques, and revision of designs and scripts. Scripts for audio, still projection, and motion picture and television productions will be written.

**CM330 Communications Media in Training and Education** 3c-0l-3sh
**Prerequisites:** CM101, 303
The course reviews the historical growth and philosophies of the design and development of training and education products and processes. The student examines the principal roles and functions of human and material resource professionals for training (performance improvement), education (competency improvement), and development (personal and organizational growth).

**CM335 Consulting Practices in Communications** 3c-0l-3sh
**Prerequisite:** CM101
The course presents the theoretical views and clinical applications of consulting skills and practices associated with and needed by communication professionals. Presented will be the functions and role of the consultant, the client's perspective on consulting, hiring a consultant, ethics in consulting, personal assessment tests, and related literature and models.

**CM375 Mass Media and Behavior** 3c-0l-3sh
**Prerequisites:** PC101 and junior or senior status
Theory and research on the influence of the mass media on human behavior and attitudes. Topics include the effects of news and political advertising on public opinion; the effects of racist and sexist portrayals; and the effects of violence and pornography on aggressive behavior. (Also offered as PC375; may be taken only once)

**CM380 The History of African Americans in Film** 3c-0l-3sh
Traces the historical development of the roles of African Americans in film and television. Students examine the early stereotypic portrayals of this group, the origins of these stereotypes, and the ongoing changes, positive and negative, that have occurred regarding the media representation through research, film, and archetypal analysis, observation, and discussion. The new generation of African American filmmakers and their creative efforts to promote more realistic portrayals are analyzed.

**CM390 Practicum in Communications** var-1-3sh
**Prerequisites:** CM101, written permission
An opportunity with credit for students to make contributions to department and campus media-related facilities and offices including WIUP-TV, WIUP-FM, Penn, Oak, Public Relations, Media Resources. Repeatable for a maximum of six credits.

**CM395 Career Planning in Communications Media** 1c-0l-1sh
**Prerequisite:** Minimum 20 CM credits
The course serves as a primary skill-building and strategy-seeking experience for the internship program and later career entry and growth. Extensive writing, research, and individual counseling are involved. Travel may be necessary.

**CM403 Writing for Broadcasting** 3c-0l-3sh
**Prerequisites:** CM101, permission
The course acquaints students with the various techniques used in writing scripts for radio and television and makes them aware of the visual impact of television and the audio impact of radio. Students are made aware of the limitations of television and radio as well as their unique features.

**CM404 Foundations of Broadcasting** 3c-0l-3sh
**Prerequisites:** CM101, permission
Examination of the historical, legal, and economic aspects of broadcasting. Impact of broadcasting on society will be explained as well as the impact of the new technology on our existing broadcasting systems.

**CM405 Radio Production** 3c-0l-3sh
**Prerequisites:** CM101, 200, 403, 404, permission
An introduction to production techniques as they pertain to radio. The student will be exposed to programming, scripting, producing programs, intros, outros, commercials, public service announcements, station identifications, and promotional announcements. The course will also deal with the interaction of a radio station with national networks and with the real-life concerns of deadlines.

**CM430 Analysis of Communication Products and Processes** 3c-0l-3sh
**Prerequisites:** CM330, permission
The course will provide both a framework for action and tools to measure the effectiveness of training and education in human and material resource development programs. The course contains practical theory and problem-focused discussion with students regarding application. Topics include instrument choice or construction, data collection and analysis, interpretation, and alternative presentation strategies of the findings.

**CM435 Organizational Development in Communications Media** 3c-0l-3sh
**Prerequisites:** CM330, permission
The course presents the basic methods and approaches for organization, management, and development of human and material resource departments. The topics include the primary activities and roles of an HMRD director, problem-solving functions in reporting to management, characteristics associated with career systems, and special topics.

**CM440 Communications Graphics** 3c-0l-3sh
**Prerequisites:** CM101, permission
Provides basic experiences in planning and producing a commonly used television studio, industrial display, and classroom graphics which are applicable in educational, industrial, and medical training programs. Experiences include technical layout and lettering; color; mounting and laminating; copying and reproduction techniques utilizing photography and xerography; photo silk screening and photo sketching.

**CM441 Advanced Communication Graphics** 3c-0l-3sh
**Prerequisites:** CM440, permission
Provides in-depth experience in planning and preparing graphic materials commonly used in the communications profession; graphic materials include design, photosketching, lettering, slide titling and duplication, preparation of camera-ready art, lithographic film and master layout sheets, professional slide flat production and photocopy, large-format transparency production, color key, and color systems.

**CM445 Applications and Techniques of Motion Pictures** 3c-0l-3sh
**Prerequisites:** CM444, permission
A survey of the role that motion picture film production plays in society. Major emphasis will be placed on the variety of applications with special consideration given to motion pictures as a tool to support research.

**CM449 Basic Audio Recording Techniques** 3c-0l-3sh
**Prerequisites:** CM101, 403, permission
Theory and practice of recording sound, developing an understanding of the language of sound recording as well as the ability to make sound recordings. Exposure to recording for various media including radio, music, motion pictures, television, multi-image, and slide and tape production. Material also appropriate for teachers who wish to make use of tape recorder in the classroom. Students will gain hands-on experience through labs and projects to be completed outside of class. Students will be expected to provide an audio tape recorder.

**CM450 Advanced Audio Recording Techniques** 3c-0l-3sh
**Prerequisites:** CM449, permission
Sound recording utilizing advanced techniques and concentrating on specific applications. Student participates in an intensive lab experience utilizing the most advanced equipment available. Emphasis on application, editing, signal processing, and multi-track recording. Student is expected to produce a sound recording for a specific use of professional quality.

**CM451 Television Production** 3c-0l-3sh
**Prerequisites:** CM101, permission
Develops basic skills in television production and direction. Consideration of operating problems of a television studio, as well as functions, limitations, and capabilities of television equipment and facilities.

**CM452 Electronic Field Production** 3c-0l-3sh
**Prerequisites:** CM451, permission
Provides in-depth field experience with portable video equipment and lighting. Students edit programs to broadcast quality.

**CM453 Broadcast News Process** 3c-0l-3sh
**Prerequisites:** CM405, 451, permission
Reporting and presenting radio and TV news programs. Analysis of news and public affairs broadcasting.

**CM454 Broadcast Regulation** 3c-0l-3sh
**Prerequisites:** CM404, permission
This course delves into the areas of law affecting broadcasters. Topics covered are laws pertaining to cable television, station licensing and renewal, political broadcasting, libel, copyright, the right of reply, and privacy. The historical development of the FCC and its jurisdictions will also be examined. Case studies will be discussed along with the relevancy of some laws as they pertain to today's society.

**CM455 Television Performance** 3c-0l-3sh
**Prerequisites:** CM451, permission
Provides theory and practice for performing on television. Detailed analysis of a performer's role in a variety of settings.

**CM456 Broadcast Management** 3c-0l-3sh
**Prerequisites:** CM404, permission
Detailed examination of the management decision-making process in radio and television; particular reference to program policies, personnel administration, and community relations.

**CM460 Alternative Systems of Communication** 3c-0l-3sh
**Prerequisites:** CM404, permission
The implications and capabilities of cable systems, the private and industrial utilization of nonbroadcast services, the emergence of satellite CATV networking, and the application of two-way cable response systems.

**CM472 Photography II: The Print** 3c-0l-3sh
**Prerequisites:** CM271, permission
Students will develop camera and print-making skills to the degree that they can produce salon-quality photographic prints. Students will understand the photographic processes utilized in producing a high-quality negative and print to the extent that they can manipulate those processes to communicate an intended message with their photographs. Emphasis on camera and print control as well as composition and negative and print manipulation.

**CM473 Creative Darkroom Techniques** 3c-0l-3sh
**Prerequisites:** CM472, permission
Students pursue photographic competencies to a high level of proficiency. Specific topics may vary as photographic technology changes, but typical assignments include high-contrast photography through the use of graphic arts materials, multiple exposures in the camera and in projection printing, making and using paper negatives, and hand coloring of photos.

**CM476 Commercial Photography** 3c-0l-3sh
**Prerequisites:** CM271, 471, major status, permission
An introduction to professional studio and location work, including making pictures for advertising, catalogs, publicity, and other commercial purposes. Deals with lighting, backgrounds, and camera use for photographing protraits, products, and architecture. In addition to use of the student's own 35mm camera equipment, the course provides experience with the 4x5-inch view camera. Ability to solve basic algebra problems is required.

**CM477 Slide/Sound Production** 3c-0l-3sh
**Prerequisites:** CM271, 303, 440, 449, permission
This course is designed to provide advanced students with the theoretical and practical experiences necessary to be able to plan, design, produce, and present effective slide/tape presentations for use in education, industry, and the allied health professions.

**CM478 Multi-image Production** 3c-0l-3sh
**Prerequisites:** CM271, 303, 440, 449, permission
An advanced production course employing instructional development techniques to emphasize the unique features of multiple image messages primarily through 2x2-inch slides. Scripting, storyboarding, computer programming, and audiovisual production techniques are used in the course project.

**CM480 Independent Study** var-1-3sh
**Prerequisites:** Communications Media Major only, permission
Students may, with the sponsorship of a department faculty member and consensus of the department, elect an advanced course of study which reflects the academic goals of the department. Exemplary project is intended to extend or combine field knowledge not readily available through other course offerings. Students may take one or more semester hours (40 hours or more of commitment=1sh), and multiple projects are possible; a maximum of 3sh are permitted towards a degree program.

**CM481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**CM482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students may, with the sponsorship of a department faculty member and consensus of the department, elect an advanced course of study which reflects the academic goals of the department. Approval is based on academic appropriateness and availability of resources. Exemplary project is intended to extend or combine field knowledge not readily available through other course offerings. Students may take one or more semester hours (40 hours or more of commitment=1 sh), and multiple projects are possible; a maximum of 3sh are permitted towards a degree program.

**CM493 Internship** var-6-12sh
**Prerequisites:** Communications Media majors only, junior or senior status, permission
Supervised professional work experience in communications media. Sites reflect the academic goals of the department and are approved and administered by a department coordinator. Location, duties, length of internship, and hours are individually tailored to student career goals. Sites represent wide application of process and technology of communications in business, education, allied health, or other agencies. Students may take 3 or more sh per semester (40 hours or more of commitment=1 sh), and multiple experiences are possible; a maximum of 3sh of internship and/or field experiences are permitted towards a degree program.

## Computer Science
Department of Computer Science
College of Natural Sciences and Mathematics

**CO101 Microbased Computer Literacy** 3c-0l-3sh
An introductory course designed to provide students with a fundamental understanding of computers. The course familiarizes students with the interaction of computer hardware and software. Emphasis is placed on the application of microcomputers, the use of productivity software (word processing, spreadsheet management, file and data base management), and the social and ethical aspects of the impact of computers on society. (Does not count toward Computer Science major. Replaced CO200 in 1989-90.)
Note: This course is cross-listed as BE101 and IM101. Any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

**CO105 Fundamentals of Computer Science** 3c-0l-3sh
This is the first course for Computer Science majors. It is required of all Computer Science students and is appropriate for other Natural Sciences and Mathematics students. Topics include the fundamental concepts of computer architecture, algorithm development and analysis, programming languages, software engineering, data organization and representation, and systems software. Hands-on introduction to computer usage with an emphasis on terminology and the underlying connections within the discipline.

**CO110 Problem Solving and Structured Programming** 3c-0l-3sh
(For Science, Mathematics, and Computer Science majors, and for others who have a sufficiently quantitative orientation)
Basic structure of modern digital computers; problem analysis and computer solution using flowcharting and the C++ language. Exemption or credit by examination possible.

**CO201 Internet and Multimedia** 3c-0l-3sh
**Prerequisite:** BE/CM/CO/IM 101 or prior exposure to word processing and electronic mail.
The major focus will be on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. This information literacy course is designed for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students will learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BE/CM/CO/IM/LB 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit)

**CO205 Programming Languages for Secondary Education** 3c-0l-3sh
**Prerequisite:** Education major
Provides an introduction to the three high-level programming languages most commonly used in secondary education: Pascal, LOGO, and BASIC, with particular emphasis on Pascal. Also includes a comparative study of the control structures and data structures present in these three languages. This course is intended to establish a solid foundation to prepare prospective teachers of computing courses K-12. (Note: Previous experience with microcomputers is strongly recommended. Does not count toward a Computer Science major. Credit toward graduation will not be given if this course is taken after completing six or more credits of computer science courses.)

**CO220 Applied Computer Programming** 3c-0l-3sh
**Prerequisite:** CO110 or equivalent
Structured programming principles and techniques, as implemented through the ANS COBOL language; program design using top-down techniques; program and project documentation; introduction to sequential file algorithms.

**CO250 Introduction to Numerical Methods** 3c-0l-3sh
**Prerequisites:** CO110, MA122 or 123 or 127
Algorithmic methods for function evaluation, roots of equations, solutions to systems of linear equations, interpolation, curve fitting, numerical differentiation and integration; errors in computation. Introduction to FORTRAN90 programming and introduction to the use of a mathematical software package to graph functions.

**CO281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**CO300 Assembly Language Programming** 3c-0l-3sh
**Prerequisite:** CO110 or equivalent
Examination of structure and languages of machines; representation of data, addressing techniques, symbolic coding, assemblers, macros, etc.; problem solution using assembly language.

**CO310 Data Structures** 3c-0l-3sh
**Prerequisite:** CO110
Basic concepts of data; storage systems and structures; lists, arrays, strings, hashing techniques; searching and sorting techniques; data structures in programming languages; string processing. Programming in a object-oriented language.

**CO315 Large File Organization and Access** 3c-0l-3sh
**Prerequisite:** CO220
The organization of large computer files for business systems, information systems, and other applications. Use of advanced COBOL for efficient file access. Evaluation of file access methods and directory organization. Introduction to random file algorithms and integrated file systems.

**CO319 Software Engineering Concepts** 3c-0l-3sh
**Prerequisite:** CO315 or permission of instructor
Includes the collection of tools, procedures, methodologies, and accumulated knowledge about the development of the software life cycle; current methodologies, tools, and techniques being applied to each phase will be discussed in depth with localized exercises given to reinforce learning of concepts.

**CO320 Software Engineering Practice** 1c-2d-3sh
**Prerequisite:** CO319 or permission of instructor
Planning, design, and implementation of large software systems using software engineering techniques. Students work in project teams on real or realistic software development projects. Credit for either CO320 or CO493 may count toward computer science major requirements for graduation but not both; the other course credits are free electives.

**CO345 Data Communications** 3c-0l-3sh
**Prerequisites:** CO110 or 220; MA121 or 123; MA214 or 216 or 217; or equivalents
Communication of digital data between computers and to and from terminals and other peripherals; computer networks; small design projects or term paper.

**CO355 Computer Graphics** 2c-1l-3sh
**Prerequisites:** CO310 and junior status
The use of computer graphics hardware and software. An overview of current applications and experience with representative software will introduce current practice. Foundations in primitives, geometry, and algorithms of passive computer graphics are the principal focus of the course. A brief introduction to interactive computer graphics will be included.

**CO360 IBM Job Control Language** 1c-0l-1sh
**Prerequisite:** CO220 or permission of instructor
Detailed study of the job control language (JCL) of the IBM OS operating system; comparison of OS with the locally available DEC operating system, VAX VMS.

**CO362 UNIX and C** 3c-0l-3sh
**Prerequisite:** CO310 or permission of instructor
An introduction to the history, features, syntax, and applications of UNIX and C. Lectures, reading, and hands-on projects. Coverage includes two or more command interfaces, variations in C, and portability issues. UNIX is a trademark of Bell Laboratories.

**CO380 Seminar on the Computer Profession** 0c-1d-1sh
**Prerequisite:** Permission (See text below)
Reading, review, and discussion of the current literature of computer science and industry trade journals; effective oral presentations; employment prospects. Should be taken the semester before an internship or the first semester of the senior year. Should not be taken at the same time as CO480.

**CO405 Artificial Intelligence** 3c-0l-3sh
**Prerequisite:** CO310
An introduction to the field of artificial intelligence, i.e., the study of ideas that enable computers to process data in a more intelligent way than conventional practice allows. The course covers many information representation and information processing techniques. Students will explore the underlying theory including matching, goal reduction, constraint exploration, search, control, problem solving, and logic.

**CO410 Processor Architecture and Microprogramming** 3c-0l-3sh
**Prerequisites:** CO300 and 310
The logical description of computer processor structure (architecture), with emphasis on the microprogramming approach. Project assignments using minicomputer.

**CO419 Software Development with Ada** 3c-0l-3sh
**Prerequisite:** CO310
Introduction to the Ada programming language as a tool of the software engineer. Projects will use the advanced programming constructs resident in Ada, including packages, multi-tasking, generic units, exception handlers, and concurrent programming.

**CO420 Modern Programming Languages** 3c-0l-3sh
**Prerequisites:** CO220 and 310
Comparative study of the properties and applications of a range of modern higher-level programming languages, including Ada, APL, C, LISP, LOGO, Pascal, PROLOG, and SNOBOL. Comparison with older languages such as ALGOL, BASIC, COBOL, FORTRAN, and PL/I.

**CO424 Compiler Construction** 3c-0l-3sh
**Prerequisites:** CO300 and 310
Relates the formal concepts of automata and language theory to the practicality of constructing a high-level language translator. The structures and techniques used in lexical analysis, parsing, syntax directed translation, intermediate and object code generation, and optimization are emphasized.

**CO430 Introduction to Systems Programming** 3c-0l-3sh
**Prerequisites: CO300 and 310**
Concepts and techniques of systems programming with an emphasis on assembly, linking, loading, and macro processing for user programs. Overview of higher-level language translation and system control. Programming and research projects.

**CO432 Introduction to Operating Systems** 3c-0l-3sh
**Prerequisites:** CO300, CO310 or equivalents
Introduction to the principles of operating system design and implementation. Topics include interrupt service, process states and transitions, spooling, management of memory and disk space, virtual storage, scheduling processes and devices, and file systems.

**CO441 Data Base Management** 3c-0l-3sh
**Prerequisite:** CO315
Review of data base concepts. Detailed study of data base management approaches. Comparative study of commercially available data base management systems. Project on the locally available data base systems.

**CO444 Productivity Tools and Fourth Generation Language** 3c-0l-3sh
**Prerequisite:** CO 441 or IM 450
Develop an understanding of productivity issues and how Fourth Generation Languages (4GL) improve productivity as contrasted with 3GLs. Advances in the programming paradigm such as event driven programming, objects, reusability, graphical user interface (GUI) design and development, information systems based on relational data bases, and client/server technology are addressed. Students will gain a practical experience with these concepts through an in-depth study of Visual Basic and the development of a GUI interface to a relational database using Visual Basic.

**CO450 Applied Numerical Methods** 3c-0l-3sh
**Prerequisites:** CO250, MA171, and MA241, or equivalents
Polynomial approximations using finite differences, with applications in numerical integration and differentiation. Numerical solution of initial value ordinary differential equations. The APL language will be introduced and used, along with FORTRAN, in programming selected algorithms.

**CO451 Numerical Methods for Supercomputers** 3c-0l-3sh
**Prerequisites:** MA121 and 122, or MA123 or 127, MA171, CO250
Supercomputers make use of special computer architectures—vector and parallel processors—in order to achieve the fastest processing speed currently available. Students will be introduced to these features and will learn how numerical algorithms can be constructed to exploit supercomputers' capabilities. Students will gain practical experience in programming for the Cray. YMP, in incorporating existing scientific software packages into user-written programs, in submitting remote jobs to the Pittsburgh Supercomputer Center, and in producing animated graphical output to summarize the typically large volume of output data generated by large scientific programs. (Also offered as MA451; may not be taken for duplicate credit)

**CO460 Theory of Computation** 3c-0l-3sh
**Prerequisites:** CO310 or consent of instructor
Formal methods for describing and analyzing programming languages and algorithms. Backus-Naur forms; productions; regular expressions; introduction to automata theory; Turing machines; recent concepts in algorithm theory computability.

**CO480 Seminar on Technical Topics** 0c-1l-1sh
**Prerequisites:** See text below
Reading, review, and discussion of the current literature of computer science and industry professional and technical journals; oral presentations. Should be taken the last semester of the senior year. Should not be taken at the same time as CO380.

**CO481 Special Topics** var-l-3sh
**Prerequisite:** As appropriate to course content
Seminar in advanced topics of computer science; content will vary depending on interests of instructor and students. May be repeated for additional credit. Special Topics numbered 481 are primarily for upper-level undergraduate students.

**CO482 Independent Study** var-1-4sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval based on academic appropriateness and availability of resources.

**CO485 Independent Study** var-12sh
**Prerequisites:** Permission of a computer science faculty member who agrees to supervise the student's project. Arrangements for selection of a specific topic must be made.

**CO493 Internship in Computer Science** var-12sh
**Prerequisites:** CO300, 310, 315, 319, 380, other courses depending on type of internship position desired, completion of application, and selection by committee
Positions with participating companies provide students with paid experience in computer science under the supervision of the companies and faculty. Requirements include three on-site consultations, two university consultations, completion of progress reports, oral presentation, and a final cumulative paper. Offered only to students during the second semester and summer of the junior year or the summer and the first semester of the senior year. No more than four semester hours of CO493 may be applied toward the 30-semester-hour requirement for a major in Computer Science

# CR Criminology

Department of Criminology
College of Humanities and Social Sciences

**CR101 Crime and Justice Systems** 3c-0l-3sh
This course introduces the field of criminology through the examination of historical data, statistical information, theories of criminal causation, social control of behavior, development of laws, evaluation of criminal justice system policies, procedures, and trends. Students will learn the terminology of the field, gain an awareness of the methods of inquiry utilized in the field, and have the opportunity to examine personal attitudes and values regarding crime and responses to crime.

**CR102 Survey of Criminology** 3c-0l-3sh
The purpose of this course is to provide an understanding of the discipline of criminology through an examination of its theories, basic assumptions, and definitions.

**CR210 Criminal Law** 3c-0l-3sh
A study of the history and sources of criminal law coupled with an analysis of the substantive elements of specific crimes.

**CR260 Criminal Procedure and Admissibility of Evidence** 3c-0l-3sh
Law of arrest, search, and seizure, with discussion of important case law. Analysis of safeguards established for protection of individual liberties.

**CR270 Juvenile Justice System** 3c-0l-3sh
A study of the agencies and processes dealing with juvenile justice in the United States.

**CR281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**CR283 Police Patrol Administration** 3c-0l-3sh
The study of the role and characteristics of the police patrol function. Special emphasis is given to understanding how patrol relates to other police functions and its effect on crime.

**CR291 Theory and Techniques of Interviewing** 3c-0l-3sh
Consideration of the theory, nature, methods, and principles of interviewing.

**CR295 Criminal Investigation** 3c-0l-3sh
The study of logical and scientific principles necessary for the detection and investigation analysis of criminal activities. Theories of information, interrogation, observation and interrogation, and observation and ethics are among the topics to be discussed.

**CR300 Theory of Complex Criminal Justice Organizations** 3c-0l-3sh
**Prerequisite:** CR102 or permission of instructor
Study of the evolution and theories of organizational alternatives and their application to the administration of justice.

**CR306 Criminological Research Methods** 3c-0l-3sh
**Prerequisite:** CR102 or permission of instructor
An introduction to the basic criminological research methods designed to prepare the student to understand and participate in quantitative and qualitative research.

**CR355 Crime in the Workplace** 3c-0l-3sh
Study of the theoretical and legal basis of crime in the workplace.

**CR357 Law, Social Control, and Society** 3c-0l-3sh
The evolution and development of the modern legal system. Topics include civil, criminal, and administration law, the legal profession, legal systems in American society, and the law as one of many instruments of social control and social change.

**CR361 Juvenile Law** 3c-0l-3sh
An analysis of pertinent juvenile law and procedure involving case study methods.

**CR370 Correctional Institutions** 3c-0l-3sh
An examination of the organization and function of correctional institutions. Emphasis is placed on various social processes and problems associated with incarceration.

**CR371 Community-Based Corrections** 3c-0l-3sh
A survey of noninstitutional programs, focusing on alternatives to incarceration in community settings. Programs reviewed include prerelease, probation, parole, halfway houses, and restitution-based programs.

**CR383 Police Administration** 3c-0l-3sh
A study of police management, structure, and operations and their roles in the quality of services delivered. The relationship between police administration and its social environment will be examined.

**CR386 Correctional Administration** 3c-0l-3sh
A study of correctional management, structures, and operations and their roles in the quality of services delivered. The relationship between correctional administration and its social environment.

**CR388 Court Administration** 3c-0l-3sh
A study of court responsibility within the criminal and civil justice systems: jurisdictions, policies, and management procedures in court administration.

**CR390 Women and Crime** 3c-0l-3sh
A study of the nature and extent of women's crime, theories of female criminality, processing of women offenders through the criminal justice system, the response of police and court officials to women as victims of crime, and opportunities for women as employees in criminal justice agencies.

**CR391 Substance Use and Abuse in Criminal Justice** 3c-0l-3sh
Study of substance use and abuse confronting American society. Alcohol and drug use and abuse education, philosophy, physiological effects, and social aspects will be examined in terms of control measures and public safety.

**CR400 Theoretical Criminology** 3c-0l-3sh
A review and critical analysis of the major criminological theories beginning with the Classical School: psychological, sociological, economic, biological, and political theories of crime and its causes will be included.

**CR401 Contemporary Issues in Criminology** 3c-0l-3sh
Examination of the nature and extent of crime in modern Western society. Emphasis will be placed on issues selected from, but not limited to, emerging patterns of violence, organized crime, white collar crime, victimless crime, corruption, and those crime control strategies deemed appropriate in a democracy.

**CR416 Criminal Justice Personnel and Supervision** 3c-01-3sh
Study of public personnel systems with specific application to criminal justice agencies. The role and function of supervision as a concept of a comprehensive personnel system as well as the relationship between agency personnel and the impact on crime will be examined.

**CR451 Etiology of Delinquent Behavior** 3c-0l-3sh
An analysis of the prevalent theories of delinquency causation with a view toward developing prevention, control, and treatment approaches.

**CR470 Comparative Study of Justice** 3c-0l-3sh
Comparison of American systems of administration of justice with those of other nations.

**CR480 Seminar in Criminology—The Administration of Justice** 3c-0l-3sh
A study of selected topics in criminology—the administration of justice. May be taken more than once for a maximum of 6 semester hours. Not for credit after prior CR480: Seminar in the Administration of Justice.

**CR481 Special Topics in Criminology** var-1-3sh
**Prerequisite:** Department consent
A seminar providing study of selected topics not emphasized in other courses. May be taken more than once to a maximum 6 semester hours.

**CR482 Independent Study in Criminology** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**CR491 Individual and Group Treatment Modalities** 3c-0l-3sh
A study of the therapeutic techniques, process, and application used in various criminal justice environments.

**CR493 Internship** var-3-12sh
A structured field placement designed to broaden the student's educational experience through observation and participation in work assignments in government or private sectors. Six semester hours of credit can be applied to the major requirements.

# CS Consumer Services

Department of Human Development and Environmental Studies
College of Health and Human Services

**CS101 Personal and Family Management** 3c-0l-3sh
Management as a system and its relationship to individuals and families. Formulation of goals, values, and standards; use of decision-making process; utilization of resources.

**CS117 Design Graphics** 1c-0l-3sh
Introduction to drafting and presentation techniques as they relate to interior design. Two- and three-dimensional graphic hand skills including drafting, delineation of shading and perspective, application of color, media, texture, tone, and lettering are introduced.

**CS205 Color Theory and Application** 3c-0l-3sh
The theoretical basis of color is presented as it relates to the human visual system, light, pigment, perception, and measurement. The application of color theory is discussed in terms of interior design, merchandising, and display.

**CS213 Residential Appliances and Consumer Electronics** 2c-2l-3sh
Consumer education in the selection, use, and care of home equipment appliances and consumer electronics; the relationship of energy sources and utilities to major appliances, portable and personal care appliances, and consumer electronics.

**CS217 Interior Design** 1c-3l-3sh
**Prerequisite:** AR120 or equivalent
Emphasis upon development of knowledgeable consumers in the selection and design of a home, its furnishing, and its total environment.

**CS281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**CS299 Cooperative Education I** 0sh
**Prerequisite:** Approval of co-op coordinator
Designed to combine theory with practical application through job-related experiences. Consumer services majors are actively employed in business, industry, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives. First of two alternating work experiences required.

**CS310 Human Factors in Interior Design** 3c-0l-3sh
**Prerequisite:** Junior standing
The study of human and technology systems interface as related to interior design. Emphasis on ergonomic and economic decision making to insure that the user can function with a minimum of stress and a maximum of efficiency.

**CS312 Housing and Culture** 3c-0l-3sh
Managerial, sociological, economic, and aesthetic aspects of housing and man are investigated as well as a consideration of the environment of the home as part of the community.

**CS315 Consumer Economics and Family Finance** 3c-0l-3sh
Economic, sociological, and psychological principles are applied to family money management problems. Information needed to manage finances effectively and to become a rational consumer is presented.

**CS357 Interior Design Studio** 1c-3l-3sh
**Prerequisite:** CS217
Creative solutions to problems in interior environments emphasized. Professional interior design practices; design opportunities.

**CS399 Cooperative Education II** 0sh
**Prerequisite:** Approval of co-op coordinator
A program designed to combine theory with practical application through job-related experiences. Consumer services majors are actively employed in business, industry, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives. The student is required to serve a minimum of two alternating work experiences.

**CS413 Problems in Consumer Economics** 3c-0l-3sh
**Prerequisite:** CS315 or Economics
Problems of consumer-seller relationships studied with emphasis given to effects of current economic and social forces. Governmental and private protection agencies which aid the consumer are reviewed. Individual investigations required. Fall semester only.

**CS416 Problems in Family Finance** 3c-0l-3sh
**Prerequisite: CS315**
In-depth theories and principles in personal and family finance and the rights and responsibilities of consumers are emphasized. Opportunities are provided for students to explore specific areas of interest. Spring semester only.

**CS421 Senior Seminar** 2c-0l-2sh
**Prerequisites:** Completion of 90 semester hours
Knowledge gained in major and outside concentration courses is applied to individual career goals. Students have the opportunity to pursue related areas not directly covered in previous coursework, with emphasis upon independent research, analytical thinking, and communications skills.

**CS433 Study Tour** var-1-6sh
**Prerequisite:** Upper-level standing
Opportunity is provided to visit business establishments and cultural centers concerned with household equipment, furnishings, textiles, clothing, and housing in America as well as abroad. Museums, factories, designers' showrooms, distribution centers, stores, cultural events, and seminars are included. Course may be repeated for a total of 6 semester hours. (This course is cross-listed as FM433.)

**CS461 Microwave Cooking Technology** 2c-2l-3sh
Study of the electronic technology, selection, care, and use of the microwave oven. Basic physical and chemical concepts related to microwave cooking are included. Individual investigative research problems are required.

**CS462 Historic Interiors** 3c-0l-3sh
Chronological study from ancient times to the mid-19th century of the dominant influences and characteristics of historical interiors, furniture, and ornamental design. Emphasis placed upon style detail and its relationship to social, economic, political, religious, and aesthetic influence and to the contemporary scene. Paper required.

**CS463 Modern Interiors** 3c-0l-3sh
Chronological study from mid-19th century to the present of the dominant influences and characteristics of the 20th-century interior, furniture, and ornamental design. Emphasis placed upon style detail and its relationship to social, economic, political, religious, and aesthetic influences and to contemporary usage. Paper required.

**CS464 Interior Planning and Drawing** 1c-3l-3sh
**Prerequisite: CS217**
Analysis and design as related to contract applications. Presentation, appropriate media, equipment, and techniques will be stressed. Freehand and mechanical methods employed to depict floor plans, elevation, and construction details with emphasis on function.

**CS465 Interior Lighting** 3c-0l-3sh
**Prerequisite:** CS217 or equivalent
Lighting fundamentals applicable to the environmental design of residential and commercial spaces. Includes calculation methods, terminology, theory of color visibility, light source alternatives, fixture function and selection, lighting trends, and related professional organizations.

**CS468 Interior Design Professional Practice** 3c-0l-3sh
**Prerequisite:** Junior standing
Planning, business organization, management, contracts, procedures, and ethics for the professional interior designer.

**CS481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**CS482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Particular consumer considerations are independently investigated in the area of housing, home equipment, interior design, clothing, and textiles, or in the management of resources. Course may be repeated for a total of 3 semester hours. Students meet with a faculty member at least 5 hours per semester hour

**CS493 Internship** var-1-12sh
Prerequisites: Approval of instructor and department chairperson; upper-level standing
Practical experience related to the student's major area of study with objectives, supervised experience, and evaluation. Course may be repeated for a total of 12 semester hours.

## DE Distributive Education
Department of Office Systems and Business Education
Eberly College of Business

**Note:** All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

**DE281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**DE331 Modern Merchandising** 3c-0l-3sh
Techniques for planning and controlling inventory, analyzing sales, working with modern systems for handling cash, and using color, line, and design. Practice in preparing merchandise display units.

**DE332 Retail Management** 3c-0l-3sh
**Prerequisite:** DE331 or 333
Study of structure and changing environment of retailing; special emphasis on merchandise management, organization, sales promotions, services, and control.

**DE333 Principles of Selling** 3c-0l-3sh
Covers field of selling, preparing to sell, the selling process, and an introduction to sales management. Sales demonstrations incorporating audiovisual aids are a part of the course.

**DE413 Methods and Evaluation in Distributive Education II** 3c-0l-3sh
**Prerequisites:** BE111, MK320, DE333, and EP202
Includes two sections of special methods and evaluation in this field. Objectives are to acquaint students with the basic principles of group and individual instruction in various subject matter areas, as well as methods of presentation. Unit plans, lesson plans, demonstrations, and evaluations will be prepared. Students select sections needed for certification.

**DE481 Special Topics** 3c-0l-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**DE482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## EC Economics
Department of Economics
College of Humanities and Social Sciences

**EC101 Basic Economics** 3c-0l-3sh
Scarcity, role of prices in determining production and the allocation of resources, business cycle analysis, policy options for reducing unemployment and inflation, economic role of government, international trade, and selected current economic problems are studied. For those who do not plan to take more than 3 semester hours of economics. Note: May not be taken after successful completion of or concurrent registration in any other Economics course.

**EC121 Principles of Economics I** 3c-0l-3sh
Nature and methodology of economics; mixed capitalism and market economy; national income; employment theory, including economics of fiscal policy; money, banking, and Federal Reserve System; international trade and finance.

**EC122 Principles of Economics II** 3c-0l-3sh
Economics of the firm; theory of consumer demand; determination of price and output in different market structures; distribution of income; economic growth.

**EC241 Contemporary Economic Issues** 3c-0l-3sh
**Prerequisite:** EC101 or 122
A rigorous but nontechnical analysis of a variety of economic problems and a formulation and evaluation of possible corrective policies.

**EC281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**EC283 Environmental Economics** 3c-0l-3sh
**Prerequisite:** EC101 or 122
Examination of economic costs and benefits of environmental control and modification. Techniques of economic analysis are used to understand economic aspects of environmental problems and contribute toward their solution.

**EC325 Monetary Economics I** 3c-0l-3sh
**Prerequisites:** EC121, 122
Organization, operation, and economic significance of U.S. monetary institutions; commercial banks and Federal Reserve System; survey of monetary theory and policy; mechanism of international payments.

**EC326 Monetary Economics II** 3c-0l-3sh
**Prerequisite:** EC325 or permission of the instructor
Detailed study of monetary theory; tasks of central banking; principal objectives of monetary policy; intensive study of recent monetary experience; complementary and competing aims of monetary and fiscal policy.

**EC330 Labor Economics** 3c-0l-3sh
**Prerequisites:** EC121, 122
History, structure, and operation of trade unions and employer organizations; major federal labor legislation; collective bargaining theory; wage determination; current labor problems.

**EC331 Economic Organization of Industry** 3c-0l-3sh
**Prerequisite:** EC122 or permission of the instructor
Social effectiveness of industries analyzed through measures of market structure, market conduct, and market performance.

**EC332 Government and Business** 3c-0l-3sh
**Prerequisite:** EC122 or permission of the instructor
An analysis of the antitrust laws focusing on the maintenance of competition, the prohibition of unfair business conduct, and the achievement of desirable economic performance.

**EC333 Regulation of Industry** 3c-0l-3sh
**Prerequisites:** EC121, 122 or permission of the instructor
Examines the theory and practice of regulation, emphasizing effects of regulation on economic performance and efficiency in the U.S.

**EC334 Economics of Corporate Decisions** 3c-0l-3sh
**Prerequisites:** EC121, EC122, MA121 or equivalent
Applications of economic theory using algebra, elementary statistics, and calculus to solve managerial optimization problems including problems of forecasting and risk.

**EC335 Public Finance** 3c-0l-3sh
**Prerequisites:** EC121, 122 or permission of the instructor
Taxation and expenditure theory at the federal level; federal budget and debt considerations; public sector impact upon economy.

**EC336 State and Local Finance** 3c-0l-3sh
**Prerequisite:** EC122 or permission of the instructor
Analysis of character and impact of state and local government revenue sources, expenditures, and fiscal systems; intergovernmental fiscal relations.

**EC339 Economic Development I** 3c-0l-3sh
**Prerequisites:** EC121, 122
Theory of growth; theory of economic development of underdeveloped countries.

**EC343 History of the Economic Development of the United States** 3c-0l-3sh
**Prerequisite:** EC101 or 121 or 122
Applications of economic theory and models of economic development to the main patterns of U.S. postrevolutionary growth; emphasizes the history of economic development as a laboratory for testing economic hypotheses.

**EC345 International Trade** 3c-0l-3sh
**Prerequisites:** EC121 and 122 or permission of the instructor
Study of the microeconomic segment of international specialization and exchange, including theories of international trade and their application to commercial policies, historical survey and examination of current problems of international trade, and the institutional setting of international trade.

**EC346 International Payments** 3c-0l-3sh
**Prerequisites:** EC121 and 122 or permission of the instructor
Study of the macroeconomic segment of international specialization and exchange, including analysis of balance of payments, exchange rates, and the mechanism of international economic and monetary adjustments; international macroeconomic policy; historical survey and examination of current international financial problems; and the institutional setting of international payments.

**EC350 Comparative Economic Systems** 3c-0l-3sh
**Prerequisite:** EC101 or 121 or 122
Evaluation of premises, practices, institutions, and performance of capitalist, socialist, and mixed economies using economic theory and measurement.

**EC351 Russian Economic Development** 3c-0l-3sh
**Prerequisite:** EC101 or 121 or 122
Study of the theory, institutions, and performance of the Russian economy including comparison of present and past patterns of economic development.

**EC355 Statistics for Economists** 3c-0l-3sh
Introduction to economic statistics, including frequency distributions, probability, distributions of random variables, functions of random variables, and tests of economic hypotheses.

**EC356 Introduction to Econometrics** 3c-0l-3sh
**Prerequisites:** EC355 or its equivalent or permission of the instructor
Introduction to econometrics, including linear normal regression models of two or more random variables, special econometric problems, and solutions of simultaneous equations.

**EC360 Economics of Health Services** 3c-0l-3sh
Analysis of the allocation of resources in the health sector using demand and supply techniques. Pricing and output decisions by physicians, hospitals, and other health agencies will be considered along with other current policy issues.

**EC371 Economics of Labor Legislation** 3c-0l-3sh
**Prerequisite:** EC330 or permission of the instructor
Economic background and effects of governmental regulation of labor relations, with emphasis on a detailed examination of National Labor Relations Act as amended.

**EC372 Economics of Wages and Employment** 3c-0l-3sh
**Prerequisite:** EC330 or permission of the instructor
Analysis of wages and employment under various market structures. Also, analysis of the impact of labor market forces on wages, prices, and distributive shares.

**EC373 Economics of Human Resources** 3c-0l-3sh
**Prerequisite:** EC101 or 122
Inquiry into economic demographics and related factors affecting growth, structure, and distribution of an economy's labor force into different occupations.

**EC383 Urban/Regional Economics** 3c-0l-3sh
**Prerequisites:** EC121 and 122
Location theory, land use patterns, urban economic/regional growth change, and urban economic problems and policies.

**EC421 Macroeconomic Analysis** 3c-0l-3sh
**Prerequisites:** EC121, 122 or permission of the instructor
Emphasizes aggregate income levels and problems of unemployment, inflation, and growth. Covers consumption and investment theories and the role of fiscal and monetary policy.

**EC422 Microeconomic Analysis** 3c-0l-3sh
**Prerequisites:** EC121, EC122, MA121 or equivalent
Consumer behavior, theory of the firm, theory of exchange, market structures, distribution, general equilibrium theory, welfare economics.

**EC480 Seminar** 3c-0l-3sh
**Prerequisite:** Permission of the instructor
Seminar in selected economic issues or problems.

**EC481 Special Topics** var-1-3sh
**Prerequisite:** Permission of the instructor
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**EC482 Independent Study** var-1-6sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**EC493 Internship in Economics** var-2-12sh
**Prerequisite:** A student must be an economics major who has completed at least 12 semester hours in economics and who has at least a 2.5 grade-point average in the major and in all coursework.
The course provides on-the-job experience in economics positions with private and governmental employers. The student is also required to complete related academic work in the form of papers and selected readings. Number of credits earned will depend upon the nature of the job and amount of time involved in internship. A maximum of six of the credits earned in this course may be counted toward the 30 semester hours in economics requirement for Economics majors.

## Education
College of Education

**ED242 Pre-student Teaching Clinical Experience I** var-1sh
**Prerequisite:** Admission to teacher certification
Observation/participation in a basic education classroom beginning not later than the sophomore year.

**ED281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**ED342 Pre-student Teaching Clinical Experience II** var-1sh
**Prerequisites:** ED242 and admission to junior standing
Students work toward the development of specific competencies that relate to individual major fields of teaching.

**ED408 Reading in the Content Areas** 3c-0l-3sh
**Prerequisite:** EL222
Problems related to teaching students reading and study skills specifically needed in each of the subject areas at the elementary level. Content teachers learn how to develop students' competence in these skills as part of their regular classroom instruction.

**ED415 Computers in the School Curriculum** 3c-0l-3sh
**Prerequisite:** BE/CO/IM101 or permission of the instructor
Students will use a variety of computer software including word processing, record management programs, and simulation programs. Emphasis will be on the application of computer programs within the K-12 school curriculum.

**ED421 Student Teaching** var-6sh
**Prerequisite:** Admission to Student Teaching
Experience in teaching at the elementary level; coordination and visitation by a university faculty member with daily supervision by a cooperating classroom teacher.

**ED423 Professional Practicum, Including School Law** var-3sh
Series of conferences and related activities to prepare students for actual teaching experiences. Parallels student teaching experience in junior and senior years. (Elementary Education majors only)

**ED431 Teaching in Home Economics** var-6sh
**Prerequisite:** Admission to Student Teaching
Experience in teaching home economics at the secondary level.

**ED441 Student Teaching** var-6-12sh
**Prerequisite:** Admission to Student Teaching
Experience in teaching at the elementary or secondary level; coordination and visitation by a university faculty member with daily supervision by a cooperating classroom teacher.

**ED442 School Law** 1c-0l-1sh
Required of all teacher certification students. Includes overview of legal principles that apply to special areas of education. Must be taken prior to student teaching.

**ED451 Teaching Science in the Secondary School** 2c-2l-3sh
**Prerequisite:** Admission to Student Teaching
Background to help science majors meet the problems of teaching science. Various inquiry approaches useful in meeting objectives of a contemporary science class are taught and exemplified.

**ED452 Teaching of English and Communication in the Secondary School** 3c-01-3sh
**Prerequisites:** EN314, 323, and 380 and admission to Student Teaching
This course is a prerequisite to student teaching in English. Introduces the student to current professional practices in the teaching of English and communications in high school.

**ED453 Teaching of Foreign Laoguages in the Elementary/Secondary Schools** 3c-01-3sh
**Prerequisites:** Successful completion uf 321-322 and 351-352 in the student's major language; passage of a language proficiency examination ur permission of the instructor, and admission to Student Teaching
The student will study current theories of language acquisition and methods of language teaching for the elementary and secondary school. Through hands-on practice and peer teaching demonstrations, the student will develop techniques for teaching functional language, planning lessons, setting curricular objectives, testing language skills, and selecting/adapting materials for both elementary and secondary school classrooms. (Course taught fall semester only)

**ED455 Teaching of Social Science in Secondary Schools** 3c-0l-3sh
**Prerequisite:** Admission to Student Teaching
Study of modern methods and techniques for teaching social science and of current curricula in social science.

**ED456 Teaching Math in the Secondary Schools** 3c-0l-3sh
**Prerequisite:** Admission to Student Teaching
Study of modern methods and techniques for teaching mathematics and current curricula.

**ED462 Issues and Innovations in Education** 3c-0l-3sh
Study of issues and innovations which influenced education will he included in this course. Educational innovations and issues which deal with curriculum, school organization, and materials of instruction will be examined.

**ED481 Special Topics** 3c-0l-3sh
**Prerequisite:** By permission only
Provides an opportunity for students to investigate in-depth an area of education under professional supervision.

**ED482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**ED495 International Study Tour in Education** var-3sh
Study of various peoples through their cultural settings and educational systems; on-site visitation to selected schools and other social agencies and institutions; seminars with school officials and directed readings.

**ED499 Multicultural/Multiethnic Educatioo** 2c-0l-2sh
**Prerequisite:** One methods course must be taken prior to, or concurrently with, ED499
Provides students with an understanding and appreciation of cultural diversity in the United States. Students will gain the ability to locate and develop curricular

## EE Early Childhood Education
Professional Studies in Education
College of Education

**Note:** Courses in Early Childhood Education are restricted to majors with a 2.5 average, except by department permission.

**EE200 Introduction to Early Childhood Education** 3c-0l-3sh
Introductory course for prospective teachers of young children. Provides students with the opportunity to gain knowledge of historical, sociological, and political aspects of early childhood education. Emphasis on systematically observing, recording, and evaluating children's behavior in classrooms. (Formerly EL353: Preschool Education)

**EE220 Language Development aod Children's Literature** 3c-0l-3sh
Includes the study of children's language acquisition and children's literature within the context of a developmentally appropriate language arts curriculum, preschool through the primary grades. Strategies for developing children's linguistic competence and integrating literature throughout the early childhood program will be emphasized. Observations, interviews, and teaching experiences are an integral part of the course. (This course is offered as a writing intensive course).

**EE281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**EE310 Integrated Curriculum I** 3c-0l-3sh
Examines the sequence of cognitive development in children and the implications for instructional programs. Stages of cognitive understanding will be applied to the basic components of numerical concepts and science concepts. Classroom management strategies that can be utilized in varied environments will be stressed.

**EE311 Integrated Curriculum II** 3c-0l-3sh
Enables students to realize the importance and relevance of content area subjects as related to the early childhood years. Planning for teaching with specific emphasis on methods and materials for social and environmental living is introduced. The integration of music and art is emphasized. Values systems and self-esteem are integral to social living.

**EE312 Aesthetic Experiences for Young Children** 3c-0l-3sh
An interdisciplinary approach to different forms of creative expression in young children. Art, music, and movement will be analyzed as aesthetic elements in a comprehensive early childhood curriculum. Development of creative potential in both teachers and children will be promoted as a means of enhancing the artist's experiences. Students will expand their use of the arts to enhance the self-esteem and self-worth of the children.

**EE315 Development and Learniog Through Play** 3c-0l-3sh
Provides early childhood educators with the knowledge and skills necessary to promote and guide children's play behavior as the child's basic learning mechanism. Emphasis on definitions, theories, and stages of play within the context of social, emotional, physical, and intellectual growth for children aged 0-8 years. Students will observe children at play, design specific learning activities that utilize a play/games format, and direct educatiunal experiences during the supervised field component. (Previous title: Play as Cognitive and Affective Development)

**EE451 Teaching Primary Reading** 3c-0l-3sh
A methods course designed to assist students in developing the reading abilities of young children. Deals with instructional issues related to teaching reading and introduces students to varying reading and pre-reading processes which are effective with young children. Also emphasizes diagnostic and assessment strategies for teaching reading.

**EE481 Special Topics** var-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
A course/seminar on topics in education appropriate for the Early Childhood Education setting.

**EE482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## EH — Education of Persons with Hearing Loss
Department of Special Education and Clinical Services
College of Education

**EH114 Introduction to Persons with Hearing Loss** 3c-0l-3sh
**Prerequisites:** Advisor permission, EH majors only
Deals with the different approaches used in teaching the hearing impaired—manual language, oral language, and total communication. The historical background of each approach is presented with its strengths and weaknesses. Criteria for the use of each approach established in consideration of degree of loss exhibited by the pupil, the age of onset, and the social and psychological implications. (Offered as Introduction to Hearing Impaired prior to 1994)

**EH115 Introduction to Sign Language** 1c-0l-1sh
Development of manual dexterity and fluency using fingerspelling. Acquisition of basic sign language vocabulary. Practice in acquiring general information from a signed message and conversing informally on commonly used topics.

**EH244 Intermediate Sign Language** 1c-0l-1sh
**Prerequisite:** EH115
Emphasis on comprehension of signed information and on developing fluency in conveying a message in both signed English and American Sign Language. Modification of signs and individualization of techniques for instruction/communication with learning-impaired or multihandicapped deaf learners.

**EH281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**EH307 Speech for Persons with Hearing Loss** 3c-0l-3sh
**Prerequisites:** EH114, SH242, 2.5 QPA
Techniques for developing, diagnosing, analyzing, and correcting the speech and voice problems of hearing-impaired individuals. Lecture, demonstration, and special projects. (Offered as Speech for the Hearing Impaired prior to 1994)

**EH308 Language for Persons with Hearing Loss** 3c-0l-3sh
**Prerequisites:** EH114, SH334, 2.5 QPA
Development and remediation of language of the hearing impaired. Language sampling and diagnostics, sentence patterning, and analytic vs. natural teaching methods. Structuring a communicative environment. (Offered as Language for the Hearing Impaired prior to 1994)

**EH329 Hearing Practicum I** var-1sh
**Prerequisites:** EH114, 115, 2.5 QPA
Provides the student with actual contact with individuals with hearing loss. Practica will be set up in appropriate school programs and/or clinics for the hearing impaired, in hearing itinerant programs, or in clinical settings where hearing-impaired individuals are receiving therapy or are being tested. Techniques of observing and evaluating behavior are presented initially to prepare the student to profit maximally from the observation experiences. Written reports of the practica are submitted and discussed, and each student is encouraged to gain experience in as many different settings as available.

**EH330 Hearing Practicum II** var-1sh
**Prerequisites:** EH329, 2.5 QPA
Provides students with actual contact with individuals with hearing loss. Practica will be set up in appropriate school programs and/or clinics for the hearing impaired, in hearing itinerant programs, or in clinical settings where hearing-impaired individuals are receiving therapy or are being tested. Techniques of observing and evaluating behavior are presented initially to prepare the student to profit maximally from the observation experiences. Written reports of the practica are submitted and discussed, and each student is encouraged to gain experience in as many different settings as available. This is a continuation of EH329: Hearing Practicum I and includes support and supervision of students in EH329.

**EH331 Advanced Sign Language** 1c-0l-1sh
**Prerequisites:** EH115, 244, 2.5 QPA
Studies the evolution of signs; dialectical sign systems. Analysis and comparison of the linguistic similarities/differences of various sign languages. Direct translation of written or spoken information on specific topics using American Sign Language or Signed English. Practice using conversation on both a social and academic level.

**EH351 Teaching Reading to Persons with Hearing Loss** 3c-0l-3sh
**Prerequisite:** EH308, 2.5 QPA
Presents basic concepts of developmental reading instruction and systematic coverage of the methods of teaching reading to students with hearing loss from readiness stages through upper school.

**EH360 General Methodology for Education of Persons with Hearing Loss** 03-0l-3sh
**Prerequisites:** EH114, 307, 308, 2.5 QPA
Provides a systematic coverage of the basic procedures for teaching curriculum subjects. Included are adaptive methods of instruction for teaching mathematics; science as it relates to the child and the curriculum; content, objectives, and resource materials for social studies; creative experiences in the field of language arts, rhythmics, and physical education and health. (Offered as General Methodology for Education of Hearing Impaired prior to 1994)

**EH365 Parent-Preschool Programs for Persons with Hearing Loss** 3c-0l-3sh
**Prerequisites:** EH 307, EH308, EH114, EX112, SH334, 2.5 QPA
Developing home/clinic programs for parents and hearing-impaired infants (0-3 years). Teaching speech, language, speechreading, use of residual hearing, and developing readiness skills at preschool level. (Offered as Parent-Preschool Programs for the Hearing Impaired prior to 1994)

**EH481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**EH482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## EL — Elementary Education
Professional Studies in Education
College of Education

**Note:** Courses in Elementary Education are restricted to majors with a 2.5 average, except by department permission.

**EL211 Music for the Elementary Grades** 2c-0l-2sh
Geared for elementary education students. Includes basic ideas for understanding, development, and confidence for future classroom teachers and their pupils in areas of music education.

**EL213 Art for the Elementary Grades** 2c-0l-2sh
The creative use of art materials and an understanding of development of capacities of children through art.

**EL215 Child Development** 3c-0l-3sh
Survey of human development, from conception to adolescence, in terms of basic scientific data. Development, growth, and behavior are studied and their implications for home, school, and community are considered.

**EL221 Children's Literature** 3c-0l-3sh
Acquisition of a wide acquaintance with children's literature, old and new. Poetry selections, annotated stories, and bibliographies will be assembled. Ways and means to develop, stimulate, and guide children's reading of literature presented. Principles and techniques of successful storytelling are studied and practiced.

**EL222 Teaching of Reading I** 3c-0l-3sh
Systematic coverage of the teaching of reading, including methods, techniques, and materials. First of a two-course sequence.

**EL257 Pedagogy I** 3c-0l-3sh
**Prerequisite:** Junior status
Competencies specific to the science of teaching will be introduced in this course. Students will become familiar with the fundamentals of teaching across all content area subject matter at the elementary level. Areas that will be explored include models of teaching, including lesson and unit planning, and creating a classroom environment that is conducive to learning. (Offered as EL356 prior to 1997-98)

**EL281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**EL312 Teaching of Elementary Science** 2c-0l-2sh
Emphasis placed upon science as it relates to child and curriculum, planning for teaching science, and recent innovations in science teaching. Course offered on the junior block only.

**EL313 Teaching Mathematics in the Elementary School** 3c-0l-3sh
**Prerequisites:** MA151, 152
Recent developments in curriculum and methods of instruction of contemporary elementary school mathematics programs. Students will become acquainted with books, materials, and other resources helpful to prospective teachers. Includes observations of master teachers.

**EL314 Teaching of Health and Physical Education** 2c-0l-2sh
Games, stunts, rhythms, relays, tumbling, dances, and skills suitable for the elementary schonl child. Teaching of health in elementary school is emphasized, including methods, materials, and lesson planning.

**EL322 Teaching of Reading II** 3c-0l-3sh
Second course of a two-course sequence. Systematic coverage of teaching of reading, including methods, materials, and lesson planning.

**EL351 Creative Activities in the Elementary School** 3c-0l-3sh
Provides students with a wide range of creative experiences in fields of art, crafts, music, rhythmics, dramatics, and games in elementary school. Stress is placed upon need to help children in developing their capacities for creative expression in these areas.

**EL357 Pedagogy II** 3c-0l-3sh
**Prerequisite:** Junior status
Principles based on classroom experience. Instruction will include classroom management skills, integration of computers in the elementary curriculum, contemporary issues in educatinn, the role of research in elementary classroom teaching, and teacher professionalism during and after field experiences. (This course is writing intensive.)

**EL411 Teaching of Social Studies** 3c-0l-3sh
Overview of social studies in elementary school. Includes study of objectives, trends, areas of content, patterns and principles of organization, and techniques of teaching. Variety of learning experiences and materials used and evaluated.

**EL422 Diagnostic and Remedial Reading** 3c-0l-3sh
**Prerequisite:** EL222
Causes of reading disability; methods of diagnosis; procedures and materials for remedial work, group and individual.

**EL425 Language Arts Across the Curriculum** 3c-0l-3sh
**Prerequisite:** EL222
Places emphasis on the view that the art of communication is an interrelated process and the task of classroom teachers is not only integrating the language arts among themselves but also integrating them throughout the entire curriculum. Techniques for teaching oral and written communication, spelling, handwriting, vocabulary development, listening, and linguistics will be presented. Special emphasis given to recent trends and research. (Replaces EL413 Teaching Language Arts effective Summer, 1992) This course is offered as a writing-intensive course.

**EL481 Special Topics** var-3sh
**Prerequisite:** Approval of instructor and department
A course/seminar on topics in education appropriate for the Elementary Education setting.

**EL482 Independent Study** var-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. (Offered as EL481 prior to 1993-94)

## EN English
Department of English
College of Humanities and Social Sciences

**Note:** The English Department has undergone extensive course revisions, which are pending Council of Trustees' approval.

**EN100 Basic Writing** 3c-0l-3sh
Designed to develop the basic English skills necessary for clear and effective communication. Reserved for selected students. This course does not meet General Education English or Liberal Studies writing requirements.

**EN 101 College Writing** 3c-var-4sh
**Prerequisite:** EN100, where required by placement testing
Normally to be taken the first semester at IUP. Courses use readings in the nature and history of language, semantic and linguistic analysis, and problems in rhetoric and other approaches to composition. Seven theme-length expository papers (or the equivalent) are written, in addition to shorter exercises and a written final examination.

**EN121 Humanities Literature** 3c-0l-3sh
**Prerequisite: EN101**
Introduces students to literature of various genres through a careful analysis of poetry, fiction, and drama. Includes literature of various time periods, nationalities, and minorities.

**EN122 Introduction to Literary Analysis** 3c-0l-3sh
**Prerequisite:** EN101
Acquaints students with the literary genres (especially fiction, poetry, and drama) by means of examples of each and provides them with some of the various critical approaches to the interpretation of literature so that they may gain the ability to apply them. At the conclusion of the course, students are expected to be able to read literature perceptively and to write critical papers about it. (Offered as EN210 prior to Spring, 1998)

**EN150 English for Foreign Students** 3c-0l-3sh
Provides international students with an opportunity to improve their ability to speak and write English before they take EN100 and EN101. The emphasis is on individualized exercises and assignments. This course carries graduation credit but does not meet Liberal Studies English requirements.

**EN202 Research Writing** 3c-0l-3sh
**Prerequisites:** EN101, sophomore standing
Teaches students to read, analyze, and evaluate nonfiction sources and to present the results of their analysis in clear, organized, carefully documented research papers. The focus of reading and research in each section will be determined by the instructor.

**EN208 The Art of the Film** 3c-0l-3sh
Concentrates on the film as an artistic medium. Eight to twelve motion pictures are shown during semester and are analyzed in class discussions.

**EN210 British Literature to 1660** 3c-0l-3sh
**Prerequisites:** EN101, 122, or permission
Surveys British literature from its beginnings to about 1660, acquainting students with the experience of reading many of the primary materials (whole works whenever possible or full, free-standing parts) and provides them with background information concerning the development and flowering of the various genres, the dominant ideas of each period, and the social and cultural context of the separate works. (Offered as EN210 prior to Spring, 1998)

**EN211 British Literature 1660-1900** 3c-0l-3sh
**Prerequisites:** EN101, 122, or permission
Surveys British literature from about 1660 to the beginning of the twentieth century, acquainting students with the experience of reading many of the primary materials (whole works whenever possible or full, free-standing parts) and providing them with background information concerning the development and flowering of the various genres, the dominant ideas of each period, and the social and cultural context of the separate work. (Offered as EN212 English Literature prior to Spring, 1998)

**EN212 American Literature: Beginnings to 1900** 3c-0l-3sh
**Prerequisites:** EN101, 122, or permission
Provides an understanding of American literature from its beginning to about 1900. The course will concentrate primarily upon a relatively small number of major works, each of which will help to illustrate the "spirit of the age" it represents. (Offered as EN213 American Literature: Beginnings to the Present prior to Spring, 1998)

**EN213 British and American Literature Since 1900** 3c-0l-3sh
**Prerequisites:** EN101, 122, or permission
A survey of major authors and works in British and American literature since 1900. Begins with the shift from Victorianism and late nineteenth-century literature into modernism, as exemplified by writers such as Woolf, Hemingway, and O'Neill, and continues with postmodernism and contemporary literature.

**EN214 The Novel** 3c-0l-3sh
**Prerequisites:** EN101, 122, or permission
This course surveys the development of the novel from Cervantes' Don Quixote to the present with emphasis on major writers and forms in English. Includes consideration of teaching the novel.

**EN215 Poetry** 3c-0l-3sh
**Prerequisites:** EN101, 122, or permission
A study in appreciation of poetry, with special attention to the technique of the poet and structure of poetry. Includes consideration of teaching poetry.

**EN216 Short Fiction** 3c-0l-3sh
**Prerequisites:** EN101, 122, or permission
A study of the development of the short story from the middle of the nineteenth century to the present with attention to form, structure, and types of the story. Includes consideration of teaching short fiction.

**EN217 Drama** 3c-0l-3sh
**Prerequisites:** EN101, 122, or permission
A study of selected plays from various periods in an attempt to understand the function of drama. Includes consideration of teaching drama.

**EN220 Advanced Composition I** 3c-0l-3sh
**Prerequisite:** EN202
Primarily seeks to improve writing style, particularly in the more utilitarian forms, such as magazine article and personal essay.

**EN221 Creative Writing** 3c-0l-3sh
**Prerequisite:** EN202
This is a seminar course in which students are expected to produce a substantial body of written work in one or more of the creative genres, the particular kind of writing chosen with regard to the special interests and abilities of each student.

**EN225 Introduction to Literature by Women** 3c-0l-3sh
**Prerequisites:** EN121 or 122 and 202
Major trends and motifs across genres (fiction, nonfiction, poetry, autobiography) which reflect themes and subjects of continuing interest to women writers. The intersection of genre with race, ethnicity, and social class will be of particular significance. (Offered as EN384 prior to Spring, 1998)

**EN281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**EN301 British Medieval Literature** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
This course examines particular literary traditions in England from the eleventh to the fifteenth centuries, excluding Chaucer. The purpose will be to acquaint students with the diversity of materials, ranging from prose to verse, oral to written, and serious to comic. Most texts will be taught in the original Middle English, accompanied by side glosses. Translations will be used where appropriate. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

**EN302 Renaissance Literature** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
Examines major works and genres in Elizabethan literature such as pastoral and tragedy and key fiction writers, dramatists, and poets during 1558-1603. Rather than survey the period comprehensively, the purpose here is to focus closely on a specific literary period and on the writers of this period as selected by the instructor. (Offered as EN361 The Renaissance prior to Spring, 1998)

**EN303 British Enlightenment Literature** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
British Enlightenment Literature refers to the imitation of the Greek and Roman authors of antiquity. The course begins with the assumptions and goals of neoclassical literature and integrates the intellectual debates and contemporary politics (patriarchy, nascent capitalism, empire, slavery, class divisions) that flourished alongside of (and that shaped the emergence of) new genres (the slave narrative, the novel, gothic tales, the periodical essay). Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

**EN304 British Romantic Literature** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
Emphasizes the relationship between literature and its milieu. Focuses primarily on English Romantic Poets, but considers development in Germany, France, and America and examines its continuing manifestations in literature, culture, and politics. Rather than survey the period comprehensively, the purpose here is to focus closely on a specific literary period and on the writers of this period as selected by the instructor. (Offered as EN360 Romanticism prior to Spring, 1998)

**EN305 British Victorian Literature** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
Examines literary works against a background of rapidly changing social, economic, religious, and political forces. Counter-culture movements, such as the Pre-Raphaelites, will be examined against "high Victorianism" to develop a sense of the tremendous intellectual and political energy of the period. Roots of recent concerns such as feminism, political literalism, and capitalism will be explored to help us better understand our own as well as the Victorian age. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

**EN306 Modern British Literature** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, and 213
Examines major works and trends in modern British literature, such as modernism or key fiction writers, dramatists, or poets during the first half of the twentieth century. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

**EN307 Contemporary British Literature** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
Examines major works and trends in contemporary British literature, such as late modernism, postmodernism, the age of diminishment, or key novelists, dramatists, and/or poets from the period, 1945 to the present. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

**EN310 Public Speaking** 3c-0l-3sh
**Prerequisite: EN101**
Fundamental principles of public speaking, audience analysis, interest and attention, and selection and organization of speech material.

**EN311 Oral Interpretation** 3c-0l-3sh
**Prerequisite:** EN310
Emphasizes understanding and appreciation of literature through developing skill in reading aloud.

**EN312 Speech--Persuasion** 3c-0l-3sh
**Prerequisites:** EN202, 310
Advanced study of problems involved in influencing an audience.

**EN313 The Rhetorical Tradition** 3c-0l-3sh
**Prerequisites:** EN101, 310
Survey of rhetorical theory from Greek and Roman through modern times.

**EN314 Speech and Communication in the Secondary English Classroom** 3c-0l-3sh
**Prerequisites:** EN122, 202
Offers students practical and theoretical approaches to relationships between oral and written communication. The course is performance based (involving a variety of communication activities) and knowledge based (involving study of research on language arts relationships). Emphasis is given to integration of the four language arts for improving teachers' own communication skills as well as those of their students.

**EN315 American Literature to 1820** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
The beginnings of American literary cultures from sixteenth-century pre-Columbian indigenous contacts with European explorations, through diverse colonializations (Hispanic, French, and British) including the importation of African slaves, up to the American Revolution and emergent U.S. literary nationalism in the first decades of the nineteenth century. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

**EN316 American Literature 1820-1880** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, and 213
Examines major works and trends in U.S. literature, from the Federalist, Romantic, and/or Realistic periods. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

**EN317 American Literature 1880-1940** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
Examines representative U.S. writers during 1880-1940. Includes traditional figures as well as writers who have recently entered the canon. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

**EN318 Literature for Adolescents** 3c-0l-3sh
**Prerequisites:** EN101, 122, or permission, English Education major
Surveys poetry, drama, and fiction with which the adolescent is familiar through school work and personal reading. (Offered as EN218 prior to 1993-94)

**EN319 American Literature 1940-present** 3c-0l-3sh
**Prerequisites:** EN202 and at least two courses from EN210, 211, 212, 213
Additional prerequisites for B.A. English majors: EN210, 211, 212, 213
Focuses on various movements, themes, genres, and authors writing in the United States since 1940. Not a survey course; each section will develop an extended treatment of a particular topic selected by the instructor. Emphasizes writing by living writers to develop an understanding of the diversity, formally and thematically, of current U.S. literary production across genders and ethnicities.

**EN320 Advanced Composition II** 3c-0l-3sh
**Prerequisites:** EN202, 220
Workshop and tutorial atmosphere for students who intend to write or teach writing.

**EN322 Technical Writing I** 3c-0l-3sh
**Prerequisite:** EN202
Focuses on helping the student to acquire and to apply communication skills essential to the technical and professional writer.

**EN323 Teaching Literature and Reading in the Secondary School** 3c-0l-3sh
**Prerequisites:** EN122, 202
Introduces students to the theory and research on teaching literature and reading in the secondary school. Reviews reader-response literary theory and classroom-based research on teaching literature. Also reviews socio-psycholinguistic reading theory and classroom-based research on teaching reading.

**EN324 Teaching and Evaluating Writing** 3c-0l-3sh
**Prerequisites:** EN122, 202, English Education major or permission
A study of modern approaches to the teaching of writing, including current theories on the composing process, as well as instruction in evaluating, including holistic scoring. Includes practice in writing.

**EN325 Creative Writing: Poetry** 3c-0l-3sh
**Prerequisites:** EN221, permission of instructor based on samples of student's work
This is a writing workshop for students who wish to focus intensively on the writing and revision of poetry and on developing an audience for one's works.

**EN326 Creative Writing: Fiction** 3c-0l-3sh
**Prerequisites:** EN221, permission of instructor based on samples of student's work
This is a writing workshop for students who wish to write fiction under the guidance of an instructor. The workshop focuses intensively on the writing and revision of prose fiction and on developing an audience for one's works.

**EN329 The History of the English Language** 1c-0l-1sh
**Prerequisite:** EN202
Studies historical development of the English language, as a basis for a better understanding of modern American English.

**EN330 The Structure of English** 3c-0l-3sh
**Prerequisite:** EN202
An introduction to the fundamentals of language study with equal emphasis on the sound, word, sentence, meaning, and discourse patterns of English. Educationally relevant topics, such as applications of linguistics to the teaching of English language and literature, varieties of grammar, and linguistic descriptions of styles and registers are an integral part of the course. Course is a prerequisite for ED452: Teaching of English in the Secondary School.

**EN332 Advanced Film** 3c-0l-3sh
**Prerequisites:** EN101, 208
Offers a close examination of classic and contemporary films and film theory from a variety of critical perspectives: spectatorship, cinematic authorship, feminism, historiography, genre, and cultural studies. Pays special attention to the treatment of women and African-Americans in film.

**EN333 Psycholinguistics** 3c-0l-3sh
**Prerequisite:** EN202
Psycholinguistics concerns the interrelation between language system and behavior and various factors of human psychology. Surveys developments since the 1940s, including relationships between language and perception, biology, memory, meaning, and cognition, as well as oral and written behavior. Students of language and literature may improve their assumptions about how human beings use language.

**EN334 ESL Methods and Materials** 3c-0l-3sh
**Prerequisite:** Junior standing or permission of the instructor
An introduction to English as a Second Language theory and practice. Aims: (1) general understanding of current theory and methods of teaching ESL; (2) ability to select appropriate, and adapt existing, materials for elémentary and high school ESL students. Recommended for all English teachers who expect to have ESL students in their classes.

**EN335 The Essay** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
Focuses on the creation and development of the essay in English, its form and content, from its beginnings to the present. Students will begin by studying Francis Bacon, the first English essayist, and follow the evolution of the form to the present day.

**EN336 Language, Gender, and Society** 3c-0l-3sh
**Prerequisites:** EN202, junior standing
Investigates the various ways that language and gender interact and intersect in society. Examines such questions as: Does society use language to favor one sex over the other? Why is language a crucial component in formulating constructs of masculinity and femininity? What stereotypes of gender-based language are promoted in our society? How can we analyze language to reveal disparate views and treatment of the sexes?

**EN337 Myth** 3c-0l-3sh
**Prerequisites:** EN202 and at least two courses from EN210, 211, 212, 213
Additional prerequisites for B.A. English majors: EN210, 211, 212, 213
Examines the nature and function of the mythic experience and explores the archetypal patterns of myths from various cultures. (Offered as EN370 Myth and Literature prior to Spring, 1998)

**EN338 Oral Literature** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
Acquaints students with the nature of oral composition, the habits of thought that orality fosters, and the particular mode of awareness the oral dimension of literature demands of an audience (and awakens in a reader). At the conclusion of the course students should have an understanding of the formulaic nature of such purely oral forms as the ballad and the epic and an awareness of the manner in which orality patterns thought differently from writing, and they should be able to detect oral features and patterns in works of literature from cultures not primarily oral but containing a high "oral residue." (Offered as EN353 The Oral Dimension prior to Spring, 1998)

**EN344 Ethnic American Literature** 3c-0l-3sh
**Prerequisites:** EN202 and at least two courses from EN210, 211, 212, 213
Additional prerequisites for B.A. English majors: EN210, 211, 212, 213
Course is concerned with ethnic U.S. experiences as expressed in poetry, fiction, drama, and autobiography. The topic will vary and be announced in advance. Examples include Asian-American, Hispanic, Irish-American, Jewish-American, and Native-American literatures.

**EN348 African-American Literature** 3c-0l-3sh
**Prerequisites:** EN121 or 122 and 202
Primarily nineteenth- and twentieth-century African-American literature (poetry, fiction, nonfiction); includes works by Frederick Douglass, W. E. B. Du Bois, spirituals and folk poetry, Harriet B. Wilson, Jean Toomer, Richard Wright, Audrey Lorde, and Toni Morrison. Emphasis on historical context and an Afrocentric approach.

**EN349 English Bible as Literature** 3c-0l-3sh
**Prerequisites:** EN121 or 122 and 202
Considers literary aspects of the English Bible by relating earlier translations to the Authorized Version of 1611 and by tracing some of the major influences of the King James Bible upon writers and speakers of modern English. Offers a close reading of the major narrative and poetic portions of the Old Testament.

**EN354 Classical Literature in Translation** 3c-0l-3sh
**Prerequisites:** EN122, 202
Masterpieces studied range from those of ancient Greece to Middle Ages. English literature and American literature excluded. (Offered as EN345 prior to Spring, 1998.)

**EN356 Film Theory** 3c-0l-3sh
**Prerequisites:** EN101, 208
An introduction to major film theories, studied in relation to representative films. Details the complex relationship between film production and film theory: i.e., how theorists have attempted to explain what appears on the screen, its impact, and its relation to "reality," and how filmmakers have responded to the works of theorists (with the two sometimes being the same). Goes far deeper into understanding film than EN208, which focuses mainly on how film is constructed through aesthetic and institutional processes.

**EN357 Major Figures in Film** 3c-0l-3sh
**Prerequisites:** EN101, 208
Studies major artists and their contributions to the development of film as an art form from its beginnings to the present. Close analyses of directors, cinematographers, editors, screenwriters, or actors – as individuals or as representatives of a movement in film. The topics will vary from semester to semester; thus, one semester may concentrate on a specific director such as Alfred Hitchcock; another semester might study women (as directors, actresses, and editors); and yet another semester might study a collective movement such as film noir.

**EN385 Advanced Women's Literature** 3c-0l-3sh
**Prerequisites:** EN202 and for non-majors EN225
Considers issues of genre and canon revision and why particular genres may have particular appeal for women writers. While many of our readings will be by "literary women," we will also consider works by women who were professionals in nonliterary disciplines.

**EN386 Regional Literature in English** 3c-0l-3sh
**Prerequisites:** EN202 and at least two courses from EN210, 211, 212, 213
Additional prerequisites for B.A. English majors: EN210, 211, 212, 213
Examines the contributions of a particular region to national literature. The focus of the course might be any of the following: Appalachian writers, local color writers, New England writers, Southern writers, writers of the American West, or Canadian writers.

**EN387 Irish Literature** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
An introduction to Irish literature since 1800, with particular emphasis on the Literary Revival in the early twentieth century. Key authors include Yeats, Joyce, Synge, O'Casey, Edgeworth, Somerville and Ross, Gregory, Beckett, and Heaney. The development of Irish writing will be examined within the contexts of Irish history, language, culture, and politics.

**EN390 Literary Tour: Britain** var-3sh
Offered selected summers, for five weeks during the first or second summer session. Visits London, Stratford, and Cambridge or Oxford, as well as other places important in English literature.

**EN391 Selected Works from the Medieval Period** 3c-0l-3sh
**Prerequisites:** EN/FL121 or EN122, EN202
Comparative study of selected works of major importance per se and as representative of major themes of medieval European literature. Also listed as FL391.

**EN393 Romanticism** 3c-0l-3sh
**Prerequisites:** EN/FL121 or EN122, EN202
Study of the principal authors and works of late eighteenth-century and early nineteenth-century Europe and the unique national characteristics of the Romantic movement in lyric, drama, and prose. Also listed as FL393.

**EN394 Nineteenth-Century European Novel in Translation** 3c-0l-3sh
**Prerequisites:** EN/FL121 or EN122, EN202
A survey of major nineteenth-century European novels in translation (excluding English), emphasizing the rise of realism and naturalism and the cultural, historical, social, and artistic relationships between the various national literatures. Also listed as FL394.

**EN395 Selected Writers from Twentieth-Century Europe** 3c-0l-3sh
**Prerequisites:** EN/FL121 or EN122, EN202
Comparative study of selected works of major importance per se or as representatives of major trends in twentieth-century literature. Also listed as FL395.

**EN396 The Literature of Emerging Nations** 3c-0l-3sh
**Prerequisites:** EN/FL121 or EN122, EN202
A comparative study of a selection of literature written in major European languages but originating in the nations of the developing world. Works will be mainly prose fiction (although essay, theater, and poetry may be included) and reflect a diversity of geographical, cultural, and prior colonial circumstances. Also listed as FL396.

**EN401 Advanced Literary Theory and Criticism** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
Acquaints students with major issues and problems in literary theory. Rather than survey the history of criticism and theory, this course focuses on modern and contemporary critical schools and methods. The purpose is to introduce students to a select group of influential theories and theorists and how such theories impact the way we read, study, and teach literature and cultural studies.

**EN420 Special Writing Applications** 3c-0l-3sh
**Prerequisite:** EN220
Offers students who are well into their disciplines "forums" for advanced reading and writing about the cultural, professional, and personal uses of textual knowledge. Students will read, analyze, and compose essays that build meaning around disciplinary knowledge, independent reading, and personal or preprofessional experience. They will be encouraged to make connections between disciplinary knowledge and emerging knowledge or experience.

**EN422 Technical Writing II** 3c-0l-3sh
**Prerequisite:** EN322
This is an advanced workshop/tutorial that provides intensive instruction in technical writing. Technical Writing II builds on the basics of audience, readability, proposals and reports, letters, memos, and resumes which are covered in Technical Writing I. The course describes the writer's role in such areas as legal and ethical aspects of technical communication; planning, testing, reviewing, and evaluating documents; and proofreading and editing.

**EN430 Major British Author** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
Examines major works of a single major author, including biographical, literary, and cultural contexts. Places the author within both intellectual/cultural history and literary developments. Major author studied in a particular semester to be announced in advance.

**EN432 Chaucer** 3c-0l-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
Studies Chaucer, his life, his language, the development of his literary style, and his art, with and through his major poetical works. (Offered as EN340 prior to Spring, 1998)

**EN434 Shakespeare** 3c-0l-3sh
**Prerequisites:** EN202 and at least two courses from EN210, 211, 212, 213
Additional prerequisites for BA English majors: EN210, 211, 212, 213
Studies Shakespeare's development as a poetic dramatist against background of Elizabethan stage; examines audience, textual problems, language imagery, and philosophy. (Offered as EN341 prior to Spring, 1998)

**EN436 Major American Authors** 3c-01-3sh
**Prerequisites:** EN202, 210, 211, 212, 213
Studies in the literary output of a major American author or authors against the background of the social and literary milieus in which the works were created. Specific subject or subjects to be announced by the instructor. (Offered as EN343 prior to Spring, 1998)

**EN460 Topics in Film** 3c-0l-3sh
**Prerequisites:** EN101, 208
Selected films dealing with a specific, advanced topic will be viewed and assessed to explore the different roles that film plays. Topic to be announced in advance.

**EN461 Topics in British Literature** 3c-0l-3sh
Prerequisites: EN202, 210, 211, 212, 213
Examines major works of a particular topic in British literature by focusing on its cultural and literary contexts. Topic to be announced in advance.

**EN462 Topics in American Literature** 3c-0l-3sh
Prerequisites: EN202, 210, 211, 212, 213
Examines major works of a particular topic in American literature by focusing on its cultural and literary contexts. Topic to be announced in advance.

**EN481 Special Topics** var-1-3sh
Prerequisite: As appropriate to course content
Vary from semester to semester covering such diverse topics as autobiography, science fiction, folklore, the political novel, black theater, etc.

**EN482 Independent Study** var-1-6sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**EN493 Internship** var-3-12sh
On-the-job training opportunities in related areas. Application and acceptance to internship program required.

## Educational and School Psychology
Department of Educational and School Psychology
College of Education

**EP202 Educational Psychology** 3c-0l-3sh
**Prerequisites:** PC101, admission to sophomore standing in teacher certification or permission
Designed to promote a better understanding of the principles of psychology governing human behavior, with particular emphasis on their relation to learner, learning process, and learning situation in an educational environment. (Offered as EP302 prior to 1992-93)

**EP281 Special Topics** var 1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**EP373 Psychology of Adolescent Education** 3c-0l-3sh
**Prerequisite:** EP202
Study of significant characteristics, behavior, and educational and social problems of adolescents.

**EP376 Behavior Problems** 3c-0l-3sh
**Prerequisite:** EP202
Examination of emotional and social aspects of behavior problems encountered in classroom situations and potential remedial techniques.

**EP377 Educational Tests and Measurements** 3c-0l-3sh
**Prerequisites:** PC101, admission to junior standing in teacher certification or permission
Designed to acquaint students with major methods and techniques of evaluation used to assess and report growth, development, and academic achievement of individuals in an educational environment. Includes interpretation of standardized test information.

**EP378 Learning** 3c-0l-3sh
Prerequisite: EP202
Explores learning theories and educational application in the classroom.

**EP481 Special Topics in Educational Psychology** var-1-3sh
**Prerequisite:** Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**EP482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**EP499 Independent Study** var-1-3sh

## Education of Exceptional Persons
Department of Special Education and Clinical Services
College of Education

**EX111 Introduction to Exceptional Persons** 3c-0l-3sh
**Prerequisite:** For department majors and official incoming transfers only
Surveys characteristics, needs, problems, and behavior patterns of any person who deviates sufficiently from "normal" to be considered exceptional. Consideration to those who fall intellectually both above and below average and to those who are handicapped visually, acoustically, behaviorally, orthopedically, neurologically, or in respect to speech patterns. (Offered as EX120 prior to 1993-94)

**EX112 Typical and Atypical Growth and Development** 3c-0l-3sh
**Prerequisites:** EX111, PC101
Presents foundations of human growth from conception, including basic embryogenesis, up to but not including adolescence. Considers the biological, cultural, educational, and parenting influences that shape the child, as well as selective examples of normal and deviant physical and intellectual development. (Offered as EX220 prior to 1993-94)

**EX221 Methods of Teaching Mathematics to Persons with Disabilities** 3c-0l-3sh
**Prerequisites:** MA151, EX111
Emphasizes recent developments in elementary curriculum and instructional techniques for developing concepts; implications of recent resource developments and materials helpful to the prospective special education teacher. Emphasis is also placed on methods of helping children learn mathematical concepts through physical activity and on ways to adapt regular classroom materials to meet needs and abilities of slow and disabled learners. (Offered as EX240 Teaching Mathematics for the Mentally and/or Physically Handicapped prior to 1993-94)

**EX222 Methods of Teaching Reading to Persons with Disabilities** 3c-0l-3sh
**Prerequisite:** Sophomore status or above
Presents basic concepts of developmental reading instruction and systematic coverage of the methods of teaching reading from readiness stages through eighth grade. Diagnostic-prescriptive techniques are included. (Offered as EX251 Methods of Teaching Reading prior to 1993-94)

**EX231 Methods of Teaching Content Area Subjects to Persons with Disabilities** 3c-0l-3sh
**Prerequisites:** EX111, GPA 2.5
Presents methods for teaching science and social studies to the mentally and/or physically handicapped. Scope and sequence of content, as well as evaluative techniques for each content area, are studied. Integration of other content areas and skill areas is stressed. Also stresses teaching in both resource room and less restrictive environments. (Offered as EX322 prior to Spring, 1998)

**EX300 Education of the Students with Disabilities in Inclusive Elementary Classrooms** 2c-0l-2sh
**Prerequisites:** For Early Childhood and Elementary Education Majors only; to be taken only during the semester of the designated methods courses
Examines the issues associated with education of students with diverse learning needs, particularly those with disabilities or who are at risk for school failure. There is an emphasis on special education, particularly the legal rights of students with exceptionalities and their parents, and the responsibilities educators in addressing those rights. The course examines the differential impact of student characteristics on elementary-level school performance and instructional methods proven to be effective in educating students with disabilities and learning style differences.

**EX301 Education of Students with Disabilities in Inclusive Secondary Settings** 2c-0l-2sh
**Prerequisite:** For Secondary Education Majors and others who will be certified to teach content from K-12
**Recommendation:** It is strongly recommended that students take this course in the same semester of the designated methods course.
This course examines the issues associated with education of students with diverse learning needs, particularly those with disabilities or who are at risk for school failure. There is an emphasis on special education, particularly the legal rights of students with exceptionalities and their parents, and the responsibilities of educators in addressing those rights. The course examines the differential impact of student characteristics on secondary-level school performance and instructional methods proven to be effective in educating students with disabilities and learning style differences.

**EX321 Methods of Teaching Language Arts to Persons with Disabilities** 3c-0l-3sh
**Prerequisites:** EX111, EX222, and SH254. GPA 2.5
Review of typical and atypical characteristics of the handicapped in relationship to the language arts. Deals with preparation and execution of units of instruction in language arts for mentally and/or physically handicapped persons. Diagnostic and prescriptive approaches are included; integration of language arts with a highlight on reading is stressed. (Offered as EX353 Reading and Other Language Arts for the Mentally and/or Physically Handicapped prior to 1993-94)

**EX340 Introduction to Behavior Management in Special Education** 3c-0l-3sh
**Prerequisites:** EX111, EX112, EP202, GPA 2.5
An overview of systematic behavioral change techniques for use with students in a variety of special education settings including integrated, resource, self-contained, special school, and residential. Emphasizes a case analysis approach to creating and evaluating behavioral changes for students with mild to severe disabilities.

**EX415 Preschool Education for Children with Disabilities** 3c-0l-3sh
**Prerequisite:** Departmental permission, GPA 2.5
Provides information on assessment, intervention strategies, curriculum, and prescriptive planning for preschool children with disabilities. Serves as a course for departmental majors who are specifically interested in early childhood education, as an elective for other interested students in related fields, and as a priority course for Early Childhood Education majors. (Formerly EX464 Preschool Education of the Handicapped)

**EX416 Education of Persons with Emotional or Behavioral Disorders** 3c-0l-3sh
**Prerequisite:** Junior status or above, GPA 2.5
Focuses on major theoretical positions regarding etiology of emotional and behavioral disorders, definition and identification of the population, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services. (Formerly EX341 The Socially and Emotional Maladjusted)

**EX417 Education of Persons with Mental Retardation or Developmental Disabilities** 3c-0l-3sh
**Prerequisite:** Junior status or above, GPA 2.5
Focuses on major theoretical positions regarding etiology of mental retardation and developmental disabilities, including autism. Definition, identification, and educational approaches are discussed. Reviews research in the field, including current issues, trends, practices, and services. (Formerly EX457 Severe and Profound Retardation and Multiple Disabilities)

**EX418 Education of Persons with Physical or Multiple Disabilities** 3c-0l-3sh
**Prerequisite:** Junior status or above, GPA 2.5
Focuses on major theoretical positions regarding etiology of a wide and diverse range of physical/multiple disabilities, the definition and identification of the population, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services. (Formerly EX430 Physical Disabilities and Psychological Handicaps)

**EX419 Education of Persons with Brain Injuries or Learning Disabilities** 3c-0l-3sh
**Prerequisite:** Junior status or above, GPA 2.5
Focuses on major theoretical positions regarding etiology of neurological and learning disabilities, definition and identification of the population, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services. (Formerly EX454 The Brain Injured and the Learning Disabled)

**EX425 Methods and Curriculum (Mild-Moderate Disabilities)** 3c-0l-3sh
**Prerequisites:** EX221, 222, 321, 322, 340, GPA 2.5
Provides in-depth examination of assessment methods, strategies, and curricula. Emphasizes assessment methods and strategies used in a variety of service models that serve elementary- and secondary-level students with learning disabilities, behavioral disorders, mild mental retardation, and high-function autism. (Formerly EX450 Methods and Curriculum Planning for Mildly and Moderately Handicapped)

**EX435 Methods and Curriculum (Severe-Profound Disabilities)** 3c-0l-3sh
**Prerequisites:** EX221, 222, 322, 321, 340, GPA 2.5
Emphasizes methods designed to facilitate the development of an integrated, functional, and community-based curriculum that will prepare students for participation in a wide variety of postschool environments.

**EX440 Ethical and Professional Behavior** 1c-0l-1sh
**Prerequisites:** Departmental permission, GPA 2.5
Emphasis on ethical and professional behavior for student teachers and professional employees. Possibilities for and methods of initiating and profiting from postbaccalaureate study are indicated. Student teachers are required to complete and present a curriculum book regarding each student-teaching experience. (Offered as EX490 prior to 1993-94)

**EX480 Seminar in Special Education** var-1-3sh
**Prerequisite:** Departmental permission
Interested students may use this course for the pursuit of knowledge regarding specific concerns of the exceptional which are not ordinarily considered in such detail during regular classroom instruction. Students wishing to enroll are expected to submit a written proposal regarding their desire for study at the time permission for enrollment is sought. With permission, the course may be repeated for credit. (Previous title: Selected Problems)

**EX481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

## FA Fine Arts
College of Fine Arts

**FA281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**FA481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**FA482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**FA493 Internship** var-3-12sh
Covers the areas of the visual and performing arts.

## FE Foundations of Education
Department of Foundations of Education
College of Education

**FE202 American Education in Theory and Practice** 3c-0l-3sh
**Prerequisites:** Students must have sophomore status and be enrolled io a teacher certification program
Provides an introduction to some of the major traditional and contemporary philosophic concepts which have played a role in the formation of educational policies and practices. Emphasis on the relationship between educational theory and practice in such areas as the role of the school in society, curricular conteot, teaching and learning methodology. educational goals. and professionalism.

**FE281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**FE440 Orientation to Teaching in Urban Centers** 3c-0l-3sh
Provides students with an understanding of learners and their unique learning needs and conditions. Emphasis on understanding the origin of attitudes and values and how these affect the relationships which exist between students and teachers. Special attention to practical application of theoretical information to problems of urban education. Field trips and guest speakers will be emphasized.

**FE441 Field Experiences in Urban Centers** var-6sh
**Prerequisite:** FE440
Provides specialized experience for students desiring to teach in inner-city schools. Aspects to be emphasized include physical characteristics of community, background and aspirations of children and youth. and specialized teacher competencies, classroom management, planning, instructional materials, teaching strategies, and evaluations. Records of comprehensive experiences in urban areas will be considered in making field experience assigniioents. Schools selected for student experience will be located in Pittsburgh.

**FE442 Interpreting Urban/Field Experiences** var-3sh
**Prerequisites:** FE440, 441
Evaluation of learning and behavior problems encountered during field experience in urban schools. Flexible approach stressed to encourage wide range of investigation and exploration of psychological and sociological problems as they affect education. Supervision and guidance for investigating specific problems provided by specialists from psychology, sociology, and education who will function as resource personnel giving direction. Enables students to combine experiences gained by teaching in urban schools with recent and pertinent theoretical information.

**FE454 Public School Administration** 3c-0l-3sh
Study of the development of public school administration; current organizational patterns for public education at the local, county, state, and national levels: and the impact of administration upon the total educational program.

**FE456 Issues and Trends in Education** 3c-0l-3sh
Critical analysis of issues and trends in education with emphasis on philosophical and social dimensions of topics covered. Attention to work of some major contemporary critics of education.

**FE481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more thao three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**FE482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness aod availability of resources.

## FI Finance
Department of Finance and Legal Studies
Eberly College of Business

**Note:** All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

**FI220 Essentials of Finance** 3c-0l-3sh
Provides students with a survey of three fundamental areas of finance: 1) Corporate Finance, 2) Basic Investment, and 3) Financial Intermediation and the Monetary System. Students will be introduced to financial analysis, planning, and control; to the management (the acquisition and allocation) of funds; and to the fundamentals of the time value of money and capital budgeting. Students will be familiarized with the basic investment markets, fundamental and technical analysis, and portfolio analysis. Students will also consider the influence of government and financial institutions on interest rates, sources of finance, investment of funds, and finance in general. (Offered for Associate Degree Program at branch campuses only; may not be used as a substitute for FI310)

**FI281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**FI310 Finance I** 3c-0l-3sh
**Prerequisites:** AG202, MA214 for business majors; AG202, MA214 or MA217 for non-business majors (MA214 recommended)
Study of the methods of securing and managing funds on short, intermediate, and long-term bases. The financial analysis, planning, and control of a corporation. Also covered is working capital management.

**FI320 Finance II** 3c-0l-3sh
**Prerequisites:** FI310, upper division only
Continues FI310 and covers topics on long-term external financing of the firm, capital budgeting, valuation of the firm, mergers, international business finance, and business failures.

**FI322 Life Insurance** 3c-0l-3sh
**Prerequisite:** FI310
Comprehensive study of that insurance which provides protection against the economic loss caused by termination of earoing capacity. Analysis benefits, underwriting, rate making, and legal doctrines.

**FI324 Principles of Investments** 3c-0l-3sh
**Prerequisite:** FI310
Analysis of various types of securities and other forms of investment possibilities and a study of sound investment policies from a corporate viewpoint. Factors influencing the general movement of security prices and the return from investments are considered.

**FI355 Financial Analysis Using Lotus 1-2-3** 3c-0l-3sh
**Prerequisites:** BE/CO/IM101 and FI310
Develops the financial students' computer modeling and analysis skills. Students will be taught how to utilize current computing resources, electronic spreadsheet, and other computing software to analyze, model, and solve a variety of financial problems.

**FI385 Securities and Commodities Markets** 3c-0l-3sh
**Prerequisites:** FI320, 324
Study of the structure of security and commodity markets; the nature of speculative transaction and methods of trading; analysis of pricing; and the objectives of security and commodity market regulation.

**FI410 Financial Institutions and Markets** 3c-0l-3sh
**Prerequisite:** FI324
Review of the entire structure of financial institutions, money, and capital markets, of which the business enterprise is both a supply and demand factor, and structure and dynamics of interest-rate movements.

**FI420 Investment Analysis** 3c-0l-3sh
**Prerequisites:** FI320, 324
Integrates the work of the various courses in the finance areas and familiarizes the student with the tools and techniques of research in the different areas of investments.

**FI422 Seminar in Finance** 3c-0l-3sh
**Prerequisites:** FI320, 324, seniors only
Primarily for the senior Finance major, covers topics in all areas of finance by using recent articles, cases, discussions, speakers, and a financial simulation game.

**FI424 International Financial Management** 3c-0l-4sh
**Prerequisite:** FI310
The financial management concepts, useful in a single-country context, are adapted for the international variables and constraints caused by being international. Provides an insight into unique issues and problems the manager of the multinational enterprise will face, such as working capital management; capital budgeting process; financing and investing abroad; capital and money markets; foreign exchange markets; and risk management.

**FI481 Special Topics** var-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**FI482 Independent Study** var-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**FI493 Finance Internship** var-3-12sh
**Prerequisites:** FI320, 324, consent of chairperson and dean
Practical experience in the finance field.
Note: Internship FI493 can be taken, if the student qualifies, as a general elective. It does not fulfill the major-area elective requirement.

## FL Study Abroad and Comparative Literature (Foreign Language)
College of Humanities and Social Sciences

**FL100 Study Abroad** var-1-12sh
Registration mechanism and limited credit arrangement as provided in preapproval process for Study Abroad programs coordinated through the Center for International Studies.

**FL121 Humanities Literature** 3c-0l-3sh
Introduces the student to works, authors, and genres of general literary significance in the Western tradition. Not organized historically but trains the student in the critical reading and appreciation of literature from the present and other periods. Authors, works, and themes are studied with respect to cultural context, aesthetic form, and thematic significance. Taught in English. Substitutes for EN121.

**FL391 Selected Works from the Medieval Period** 3c-0l-3sh
**Prerequisites:** EN/FL121 or EN122, EN202
Comparative study of selected works of major importance per se and as representative of major themes of medieval European literature. Also listed as EN391.

**FL392 Renaissance/Baroque/Classical** 3c-0l-3sh
**Prerequisites:** EN/FL121 or EN122, EN202
Literary works representing various genres from both periods are studied and compared for their themes, motifs, and stylistic features, applying principles set forth in H. Wolffin's Renaissance and Baroque.

**FL393 Romanticism** 3c-0l-3sh
**Prerequisites:** EN/FL121 or EN122, EN202
Study of the principal authors and works of late eighteenth- and early nineteenth-century Europe and the unique national characteristics of the Romantic movement in lyric, drama, and prose. Also listed as EN393.

**FL394 Nineteenth-Century European Novel in Translation** 3c-0l-3sh
**Prerequisites:** EN/FL121 or EN122, EN202
A survey of major nineteenth-century European novels in translation (excluding English), emphasizing the rise of realism and naturalism and the cultural, historical, social, and artistic relationships between the various national literatures. Also listed as EN394.

**FL395 Selected Writers from Twentieth-Century Europe** 3c-0l-3sh
**Prerequisites:** EN/FL121 or EN122, EN202
Comparative study of selected works of major importance per se or as representatives of major trends in twentieth-century literature. Also listed as EN395.

**FL396 The Literature of Emerging Nations** 3c-0l-3sh
**Prerequisites:** EN/FL121 or EN122, EN202
A comparative study of a selection of literature written in major European languages but originating in the nations of the developing world. Works will be mainly prose fiction (although essay, theater, and poetry may be included) and reflect a diversity of geographical, cultural, and prior colonial circumstances. Also listed as EN396.

**FL421 Language and Society** 3c-0l-3sh
Considers salient facts of language and its role in society and culture. Language families, linguistic change, and reciprocal influences of culture and language are presented.

**FL482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## FM Fashion Merchandising
Department of Human Development and Environmental Studies
College of Health and Human Services

**FM110 Introduction to Fashion** 3c-0l-3sh
Survey of aesthetic, cultural, sociopsychological, and economic factors related to the meaning and use of clothing for the individual and society. (Offered as CS210 prior to 1996-97)

**FM112 Fundamentals of Clothing Construction** 1c-3l-3sh
Principles and techniques involved in fundamental clothing construction and fitting are analyzed. Directed laboratory experiences provide an opportunity to solve individual problems in garment structure through the application of principles. (Offered as CS112 prior to 1996-97)

**FM212 Advanced Clothing Construction** 1c-3l-3sh
**Prerequisite:** FM112 or placement (by exam)
Principles of advanced fitting and clothing construction are applied and analyzed. Offered even years, fall semester. (Offered as CS212 prior to 1996-97)

**FM214 Environmental Textiles** 2c-2l-3sh
Investigation of components and characteristics of textiles for man's near environment with emphasis on soft goods for public and private interiors, including production, marketing, and legislation affecting acquisition, use, and care. A student may not count both FM214 and 314 toward graduation requirements. (Offered as CS214 prior to 1996-97)

**FM252 Aesthetics of Fashion** 1c-0l-3sh
**Prerequisite:** Sophomore standing
The study of contemporary apparel design and the relationship of design elements and principles to personal characteristics and social/professional orientation. (Offered as CS252 prior to 1996-97)

**FM281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**FM303 Visual Merchandising** 1c-3l-3sh
**Prerequisite:** AR120 or equivalent
Designing and arranging of display and selling areas in relationship to merchandising trends and consumer demands. Emphasis on promotion techniques and merchandise sales through effective use of space, design, and color. (Offered as CS303 prior to 1996-97)

**FM314 Textiles** 2c-2l-3sh
**Prerequisite:** CH102
Analyses of textile components of fiber, yarn, fabrication, finishes, and color with emphasis upon consumer acquisition, use, and satisfaction. (Offered as CS314 prior to 1996-97)

**FM350 Apparel Industry I** 3c-0l-3sh
**Prerequisites:** FM110, completion of 57 semester hours
Introduces the student to the design, production, and distribution of apparel, including primary textile markets; women's, men's, and children's wear; accessories; fashion centers; retailers of fashion; apparel wholesale selling process; fashion store image; and future trends. (Offered as CS350 prior to 1996-97)

**FM357 Global Issues in Textiles and Apparel** 3c-0l-3sh
**Prerequisite:** EC121
The study of the global textiles and apparel industry with emphasis on the U.S. textile complex and the U.S. market within an international context.

**FM385 Ready-to-Wear Analysis** 1c-3l-3sh
**Prerequisites:** FM112, 350
An examination and evaluation of the quality of ready-to-wear apparel through construction, style, fit, marketability, and price. (Offered as CS385 prior to 1996-97)

**FM433 Study Tour** var-1-6sh
**Prerequisite:** Upper-level standing
Opportunity is provided to visit business establishments and cultural centers concerned with household equipment, furnishings, textiles, clothing, and housing in America as well as abroad. Museums, factories, designers' showrooms, distribution centers, stores, cultural events, and seminars are included. Course may be repeated for a total of 6 semester hours. (This course is cross-listed as CS433.)

**FM434 Quality Control in Textiles** 2c-2l-3sh
**Prerequisite:** FM314
Physical properties explored through microscopic examination and use of textile testing equipment for fabric analysis. (Offered as CS434 prior to 1996-97)

**FM450 Apparel Industry II** 3c-0l-3sh
**Prerequisites:** FM350 and Liberal Studies math requirements
Introduces the student to the merchandising and promotion of apparel, including organization, buying responsibilities, techniques, and resources; various retail institutions, resident buying offices, apparel dollar planning and control, apparel merchandise assortment planning, apparel buying practices, application of apparel planning and buying, and apparel advertising and promotion. (Offered as CS450 prior to 1996-97)

**FM453 Flat Pattern Design** 1c-3l-3sh
**Prerequisite:** FM112 or 212
Garment design achieved by use of flat pattern techniques. An understanding is developed of the interrelationship of garment design, figure analysis, fabric, fit, and construction processes. Offered even years, spring semester. (Offered as CS453 prior to 1996-97)

**FM454 Tailoring** 1c-3l-3sh
**Prerequisite:** FM112 or 212
Various tailoring methods are studied and applied in the selection, fitting, and construction of a tailored garment. Consumer problems in the selection of ready-to-wear apparel are investigated. Offered odd years, fall semester. (Offered as CS454 prior to 1996-97)

**FM455 Draping** 1c-3l-3sh
**Prerequisite:** FM112 or 212
Apparel design principles are applied by draping fabric to conform to the human figure. Students will pad a form to individual measurements and create garments that are both individual and original. Offered odd years, spring semester. (Offered as CS455 prior to 1996-97)

**FM456 Historic Costume** 3c-0l-3sh
Chronological study of historic costume from ancient times to the present day with emphasis on the effect of aesthetic, economic, geographic, political, religious, and social factors upon the design of clothing worn. (Offered as CS456 prior to 1996-97)

**FM457 Historic Textiles** 3c-0l-3sh
**Prerequisite:** FM314 or with permission
A study of the development of textiles in prehistoric, ancient, medieval, and modern history with special emphasis on Western European and American textiles.

**FM480 Seminar in Fashion Merchandising** 3c-0l-3sh
**Prerequisite:** Senior standing
Knowledge gained in major and additional requirement courses is applied to individual career goals. Students have the opportunity to pursue related areas not directly covered in previous coursework, with emphasis upon independent research, analytical thinking, and communication skills.

**FM481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**FM482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Particular consumer considerations are independently investigated in the area of housing, home equipment, interior design, clothing, and textiles, or in the management of resources. Course may be repeated for a total of 3 semester hours. Students meet with a faculty member at least 5 hours per semester hour.

## FN Food and Nutrition
Department of Food and Nutrition
College of Health and Human Services

**FN110 Careers in Food and Nutrition** 1c-0l-1sh
Career possibilities for nutrition majors are explored. Students will be guided in clarifying their professional goals and will become acquainted with the educational and experiential requirements necessary to attain these goals.

**FN143 Nutrition and Wellness** 3c-0l-3sh
Introduces the student to the major components of wellness: contemporary nutrition issues as they relate to personal food choices, physical fitness, stress management, sexually transmitted diseases, AIDS, and substance abuse. Completion of FN143 fulfills the Liberal Studies Health and Wellness requirement.

**FN145 Introduction to Nutrition** 3c-0l-3sh
Provides students with an understanding of essential nutrients and their roles in the body, as well as the changing nutritional needs of an individual throughout the lifespan. Includes the impact of exercise and food choices on metabolism, body composition, and weight control; nutrition misinformation; consumer issues; commercially prepared foods; and major diseases that are affected by eating behaviors.

**FN150 Foods** 3c-0l-3sh
**Prerequisite** (or concurrently): CH102
Basic principles of food, to include composition, sanitation, preparation, and preservation.

**FN151 Foods Laboratory** 0c-3l-1sh
**Prerequisite** (or concurrently): FN150
Application of basic principles of food preparation.

**FN212 Nutrition** 3c-0l-3sh
**Prerequisite:** CH102 or 112
Sources and functions of nutrients, interdependence of dietary essentials, and nutritive value of an optimum diet are studied. Attention given to varied conditions in human life.

**FN213 Life Cycle Nutrition** 3c-0l-3sh
**Prerequisite:** FN212
A detailed study of nutrition which applies information from FN212: Nutrition to all stages of the life cycle; current issues and research as they impact on these developmental stages.

**FN245 Sports Nutrition** 3c-0l-3sh
**Prerequisites:** FN145 or 212
Emphasizes knowledge and application of sports nutrition principles. The impact of the macro- and micro-nutrients on physical performance will be discussed in light of current scientific research and applied to realistic dietary recommendation for all types and levels of athletes.

**FN281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**FN355 Nutrition in Disease I** 3c-0l-3sh
**Prerequisites:** BI155, CH102, FN212
Basic tools for diet modification: food exchange systems; interviewing techniques; nutrition assessment; professional practice; dietary treatment of injury, surgery, recovery, obesity, and diabetes. Nutrition support. Food sampling experiences. Fall semester.

**FN357 Special Problems in Foods** 0c-4l-3sh
**Prerequisite:** FN150
Individual problems in foods investigated with emphasis on identified weaknesses in the student's knowledge of food.

**FN362 Experimental Foods** 2c-3l-3sh
**Prerequisites:** FN150, FN212, CH102, or CH112
The experimental study of foods, relating chemical and physical properties to reactions and processes occurring in food systems.

**FN364 Methods of Teaching** 3c-0l-3sh
**Prerequisites:** FN313 and 356 or concurrently
Current teaching techniques and resource materials in nutrition education emphasized. Both classroom teaching and on-the-job training programs are included.

**FN402 Community Nutrition** 3c-0l-3sh
**Prerequisite:** FN212
Nutritional implications of both good and poor nutrition for all age groups in home and community situations are studied. Corrective and preventive measures emphasized. Spring semester.

**FN410 Food, Nutrition, and Aging** 3c-0l-3sh
**Prerequisite:** Junior status
Relationship of food to health maintenance and special dietary problems during the middle and later years.

**FN430 Professional Topics in Food and Nutrition** 3c-0l-3sh
**Prerequisites:** FN355, FN364, HR356, and PC101
Topics include promoting food and nutrition services and programs, career planning and development, ethical challenges to dietitians, quality assurance standards, and impact on the legislative process.

**FN444 Food Composition and Biochemistry** 3c-0l-3sh
**Prerequisites:** CH355
Basic chemistry and biochemistry of essential components of food originating from plant and animal sources.

**FN447 Nutritional Aspects of Food Technology** 3c-0l-3sh
**Prerequisites:** FN212 and BI232; junior status
Study of current known effects of food processing techniques on the nutritional value and safety of foods.

**FN455 Nutrition in Disease II** 3c-0l-3sh
**Prerequisite:** FN355
Dietary treatment of disorders of the gastrointestinal, renal, cardiovascular, and hepatic systems; inborn errors of metabolism; allergies; cancer. Therapeutic quackery. Food sampling experiences. Spring semester only.

**FN458 Advanced Human Nutrition** 3c-0l-3sh
**Prerequisites:** CH351 or 355 or, concurrently, FN212, BI155
In-depth study of the nutrients and their functions within the cell. Incorporation of the principles of physiology and biochemistry in the study of nutrition. Emphasis on current research and evaluation of research methodology.

**FN461 Microwave Cooking Technology** 2c-2l-3sh
Study of the electronic technology, selection, care, and use of the microwave oven. Basic physical and chemical concepts related to microwave cooking are included. Individual investigative research problems are required.

**FN462 Advanced Experimental Foods** 1c-4l-3sh
**Prerequisites:** FN362, CH231
An experimental approach to the many factors influencing the chemical and physical properties of food. Use of the scientific method in developing an individual project combining an evaluation of current literature and appropriate sensory and analytical methodology.

**FN463 Nutrition Counseling** 2c-3l-3sh
**Prerequisites:** FN355, PC101, FN455 or concurrently
Use of intervention strategies in prevention and treatment of disease through diet. Supervised practicum (3 hours per week) counseling clientele in normal and therapeutic nutrition.

**FN464 Food and Nutrition Research Methods** 3c-0l-3sh
**Prerequisites:** FN362, 458, CH351, and MA217
Introduction to research methodology in foods and nutrition. Includes theory and techniques of physical, chemical, and instrumental analysis. Applications of these methods to food and animal models with statistical analysis of data.

**FN470 Human Food Consumption Patterns** 3c-0l-3sh
**Prerequisites:** One social science course and junior standing
Exploration of human food consumption behaviors from food production to individual and societal consumption patterns. Influencing factors which will be discussed include agronomic, economic, geographic, sociologic, nutritional, political, and psychological factors. The ethics and morality of food distribution will be discussed. Students may not enroll in this course if they have taken the section LS499 that corresponds to this course.

**FN481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**FN482 Independent Study** var-1-6sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office; must have earned 60 semester hours
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**FN484 Senior Seminar** 1c-0l-1sh
**Prerequisites:** Senior status, FN458, 464 or concurrently
Emphasis on individual review of food and nutrition literature with formal presentation and discussion of current research.

**FN493 Internship** var-6-12sh
**Prerequisite:** Must have earned 57 semester hours
An opportunity for students to work away from the university in supervised job situations at health care facilities, restaurants, or other institutional food service or lodging establishments. Objective is to provide students with job-related experiences. Must meet university internship requirements.

**Note:** White uniforms including white shoes are required for all lab courses where food is prepared. Students must meet the professional dress requirements of the department.

## FR French
Department of French
College of Humanities and Social Sciences

**FR101 Basic French** 4c-0l-4sh
For the student beginning the study of French or who needs remedial study before beginning the intermediate sequence. Primary emphasis is on the mastery of French pronunciation and oral communication. Students will learn to converse in simple present time and become acquainted with location of Francophone populations and elements of their daily lives. Attendance and Foreign Language Learning Center practice is required.

**FR201 College French I** 3c-0l-3sh
The initiation of college-level mastery of basic language skills and exposure to cultural materials. Supplements beginners' oral competency with more advanced reading and writing. Emphasis on narration in the past. Efforts are made to practice skills and comprehend texts in authentic cultural contexts. Liberal Studies elective credit is given for this course.

**FR202 College French II** 3c-0l-3sh
**Prerequisite:** FR201 or equivalent
This course continues the college-level mastery of language skills. The ability to narrate present and past is intended to express opinion and hypothesis. Emphasis is on acquiring greater skill in reading literary and cultural texts. Liberal Studies elective credit is given for this course.

**FR203 Accelerated College French** 6c-0l-6sh
Develops listening and speaking skills through an immersion method. Students use present, past, and future to indicative tenses in intensive aural/oral interaction and are expected to make use of the audio and video capabilities of the Foreign Language Learning Center on a weekly basis. Liberal Studies elective credit is given for this course.

**FR221 Conversation III** 2c-0l-2sh
Gives students opportunity to practice the grammatical knowledge they acquire in a corresponding class and develops their oral skill. Stresses phonetics, pronunciation, and vocabulary.

**FR222 Conversation IV** 2c-0l-2sh
Continues the study of phonetics to improve students' pronunciation. Readings of relatively short texts followed by questions and answers. Some informal conversation to increase the vocabulary, to be able to react spontaneously to a given situation, and to carry the oral skill to a higher level.

**FR253 Intermediate Composition and Conversation** 3c-0l-3sh
Intermediate course in grammar, reading, composition, and some oral work. Can substitute for or be in addition to FR202 for majors or serious students.

**FR254 Civilization of Modern France** 3c-0l-3sh
**Prerequisite:** FR202 or equivalent
Study of modern French culture and civilization—social institutions, government, industry, economics, and geography. Development of all language skills for use in business situation in French-speaking environment. Emphasis on acquisition of an active knowledge of the business world.

**FR281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**FR301 Portraits of Women in the French Novel** 3c-0l-3sh
Explores the polarity of the treatment of female characters in the French novel. Explores differences of treatment by male and female writers through inclusion of women novelists. Provides a chronological survey of the development of the novel in France from the seventeenth to the twentieth centuries.

**FR321-322 Advanced Conversation I and II** each 1c-0l-1sh
Designed to increase speaking ability. The variety of content permits repetition of these relatively informal courses.

**FR351-352 Advanced French I and II** each 3c-0l-3sh
Reviews grammar in depth; analyzes the structure of the language; frequent themes required.

**FR354 Business French** 3c-0l-3sh
**Prerequisite:** FR254 or permission of instructor
Study of principles and practices of business communication in French secretarial and administrative procedures with an emphasis on the planning and writing of business letters, reports, and abstracts of articles in business and economics.

**FR361 Development of French Culture and Literature I** 3c-0l-3sh
Provides a general background in French cultural history, including art, architecture, and music and in social and political ideas and a general survey of literature. The course spans the period from the Middle Ages to the French Revolution.

**FR362 Development of French Culture and Literature II** 3c-0l-3sh
This course provides a general background in French cultural history including art, architecture, and music and in social and political ideas and a general survey of literature. Spans the period from Pre-Romanticism to the present.

**FR363 Medieval and Renaissance Literature** 3c-0l-3sh
A study of the major literary works of the period, beginning with the Chansons de gestes and emphasizing the evolution of ideas and the various literary genres.

**FR365 Seventeenth-Century French Literature** 3c-0l-3sh
A study of the major Baroque and neoclassical works in poetry, theater, and prose with special attention to the evolution of ideas and the French moralist tradition.

**FR366 Eighteenth-Century French Literature** 3c-0l-3sh
A study of the Age of Enlightenment in its principal authors and works, including the popularization of ideas for and by secondary authors; a survey of the century's intellectual and literary crosscurrents in French literature and the wider scope of foreign influences.

**FR367 Nineteenth-Century French Literature** 3c-0l-3sh
A study of the literature of nineteenth-century France with particular attention to the development of the novel while also treating the genres of poetry and theater. Attention is given foreign influences and correlations.

**FR368 Twentieth-Century French Literature** 3c-0l-3sh
A survey of the poetic, theatrical, and narrative genres of the French twentieth century with emphasis on the interaction between philosophical development and literary expression.

**FR371 The French Novel** 3c-0l-3sh
Elective survey of the origin and development of the French novel. Works representative of major genres are read in their entirety.

**FR372 Studies in Contemporary French Literature** 3c-0l-3sh
Content of this course will vary in accordance with needs and interests of those who elect it.

**FR481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times.

**FR482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. An opportunity to engage in an in-depth analysis of some topic dealing with the French language and culture through consultation with a faculty member.

**FR493 Internship** var-3-12sh
**Prerequisite:** One semester of study in France
A supervised field experience in France with approved public agencies and institutions or private firms; no longer than one semester and no less than one month. Positions will be matched as closely as possible with the intern's personal interests and professional goals. For more information, contact the director of the Internship Abroad Program.

## GE Geography
Department of Geography and Regional Planning
College of Humanities and Social Sciences

**GE101 Introduction to Geography: Human Environment** 3c-0l-3sh
Throughout history, human life and society have been shaped by the physical environment. Today, human activity threatens that environment. The relationship between humans and environment is examined in the context of the surface processes of weather, climate, plate tectonics, population distribution, and soil formation. Topics include agriculture, acid rain, global warming, deforestation, desertification, erosion, volcanism, and pollution.

**GE102 Geography of United States and Canada** 3c-0l-3sh
The cultural landscape of North America is studied. The relationship between man and environment is examined and spatial patterns of environment, economy, society, and politics are considered.

**GE104 Geography of the Non-Western World** 3c-0l-3sh
Relates theories of the discipline of geography to problems in the developing world. Emphasizes geographic components of dependency theory, indigenous versus industrial strategies of resource management; world systems theory, spatial legacies of colonialism; and development economics, theories of migration, and urban structure to explore causes, characteristics, and consequences of underdevelopment.

**GE213 Cartography I** 3c-0l-3sh
Introduces students to principles of thematic map construction. Emphasis is on the techniques of choropleth mapping and the production of scientific graphs and charts. (Also offered as RP213; may not be taken for duplicate credit)

**GE230 Cultural Geography** 3c-0l-3sh
Introduction to cultural geography, including population, settlement, historical, urban, and political geography, human relationships with the natural environment, and the literature and methods of cultural geography.

**GE231 Economic Geography** 3c-0l-3sh
Introduction to geographic concepts, methods, and skills related to spatial patterns of production, consumption, and exchange over the earth's surface.

**GE241 Physical Geography** 3c-0l-3sh
Introduction to physical geography including the study of weather, climate, soils, vegetation, landforms, energy cycles, and the hydrologic cycle.

**GE251 Geography of Pennsylvania** 3c-0l-3sh
Regions of Pennsylvania are examined in detail to identify man-environment relationships. Soils, topography, climate, vegetation, population, and economic patterns are studied.

**GE252 Geography of Latin America** 3c-0l-3sh
Impact of rapid population growth and economic development on the environment and spatial organization of Latin America are considered. The resource base and cultural heritage of the region are studied.

**GE253 Geography of Europe** 3c-0l-3sh
Investigates relationships underlying land use, dominant international problems, boundary disputes, and regional complexes of the European continent.

**GE254 Geography of Russia and the Soviet Sphere** 3c-0l-3sh
Examines the Russian Republic and the former Soviet empire including the new nations emerging from the U.S.S.R. and former satellite nations. Settlement patterns, economics, cultures, and physical environments are studied. Contemporary topical emphasis is placed on efforts at transformation from communist to market economics and the geo-political status of the new nations. (Offered as Geography of U.S.S.R. prior to 1995-96)

**GE255 Geography of Africa** 3c-0l-3sh
Systematic survey of the physical, economic, political-historical, and cultural geography of the continent is followed by regional studies of countries and peoples in Africa, south of the Sahara.

**GE256 Geography of East Asia** 3c-0l-3sh
Studies China, Japan, Korea, Outer Mongolia, Taiwan. Geographic background for development and wise use and restoration of natural resources are dealt with.

**GE281 Special Topics** 3c-0l-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students. (May also be offered as RP281; may not be taken as duplicate credit under same title)

**GE313 Cartography II** 3c-0l-3sh
**Prerequisite:** GE213
Gives an understanding of the compilation and use of maps and quantitative data. Develops skills essential to the construction of various types of maps. (Also offered as RP313; may not be taken for duplicate credit)

**GE314 Map and Photograph Interpretation** 3c-0l-3sh
Maps and air photographs, along with remote sensing materials, permit inventory, and analysis of geologic, land use, urban development, and other landscape phenomena. The understanding of these materials and associated tools for their use is presented. (Also offered as RP314; may not be taken for duplicate credit)

**GE316 Introduction to Geographic Information Systems** 3c-0l-3sh
**Prerequisites:** GE213, or equivalent, or permission of instructor
Automated methods for creating, maintaining, and analyzing spatial data are presented. Topics include 1) specialized GIS hardware and software, 2) vector vs. raster vs. object-oriented spatial data structures, 3) creation and manipulation of geographic data files, 4) data base design and management concepts, 5) spatial analysis, and 6) cartographic design. (Also offered as RP316; may not be taken for duplicate credit) (Offered as GE416, Computer-Assisted Cartography prior to 1995-96)

**GE331 Population Geography** 3c-0l-3sh
Spatial variations in numbers, characteristics, and dynamics of human population, models, and theoretical constructs relevant to demographic structures and processes are studied, as well as major world and regional problems.

**GE332 Urban Geography** 3c-0l-3sh
Basic concepts of urban geography including site, situation, function, urban land use, urban structure, and urban hierarchy are introduced. Relationships between urban geography and urban planning are explored. (Also offered as RP332; may not be taken for duplicate credit)

**GE333 Trade and Transportation** 3c-0l-3sh
Deals with the spatial aspects of transportation systems and their use. Circulation, accessibility, time and distance concepts, and trade patterns are discussed. (Also offered as RP333; may not be taken for duplicate credit)

**GE334 Political Geography** 3c-0l-3sh
Geographic factors and conditions are analyzed as they relate to the character and function of states. Political institutions are evaluated in light of geographic conditions.

**GE336 Social Geography** 3c-0l-3sh
Spatial dimensions of the American society are the focus of this course. The distribution of various social groups and their impact on the landscape are considered.

**GE337 Historical Geography** 3c-0l-3sh
Studies of past geographies, geographical change through time, and historical perspectives on the cultural landscape are included. Historical geography of the United States is emphasized.

**GE340 Geography of Fresh Water Resources** 3c-0l-3sh
Contributes to the students' understanding of fresh water as a resource. Fresh water is identified by its physical characteristics, by an inventory based on the types of storage within the hydrologic cycle, and by the values assigned to this resource by different cultures. Included in the course are problems relating to the consumptive and withdrawal uses of water, the role of water supply and water law, flooding and floodplain management, the sources of water contamination and pollution, and case studies of selected river basins.

**GE341 Climatology** 3c-0l-3sh
Elements of weather and climate and the climatic regions of the earth are studied in relation to other aspects of the physical and biological environment.

**GE342 Physiography** 3c-0l-3sh
Focuses on the study of landforms and water features. Types, distribution, and processes of formation are considered in relationship to the human landscape.

**GE352 Planning Methods** 3c-01-3sh
**Prerequisite:** RP350 or permission of instructor
Research, analytical design, and plan-making techniques in urban and regional planning. Examines basic items necessary to prepare urban and regional comprehensive plans. (Also offered as RP352; may not be taken for duplicate credit) (Offered as GE361, Planning: Basic Studies and Analysis prior to 1996-97)

**GE371 Aerospace Workshop** 3c-0l-3sh
Develops an appreciation and provides information related to aerospace activities and contributions; offers background for teaching aerospace courses; discusses aviation/space careers; and presents the basic principles of flying (usually including some flight instruction). Offered summer only.

**GE411 History of Geography** 3c-0l-3sh
**Prerequisites:** GE213, 230, 231, 241
Seminar dealing with history of the discipline, great ideas, leading problems, and unresolved issues.

**GE412 Research Seminar** 3c-01-3sh
**Prerequisite:** GE411
This senior seminar and workshop is a capstone course that focuses on recent research in the major field. Students carry out a research project on a topic of local or regional importance. (Also offered as RP412; may not be taken for duplicate credit) (Offered as GE312, Research in Geography and Planning prior to 1996-97)

**GE415 Remote Sensing** 3c-0l-3sh
Deals with air photographs, satellite imagery, thermal sensing, and radar imagery and their application to deriving information about the earth's physical and cultural landscapes. (Also offered as RP415; may not be taken for duplicate credit)

**GE417 GIS Applications Development** 3c-0l-3sh
**Prerequisites:** GE316
A project-based class in which students learn the skills to develop and maintain a Geographic Information System. Through cooperative learning students will design and implement functional systems. Methods for designing GIS systems to user specification, data collection, data input, project management, and system documentation are covered. (Also offered as RP417; may not be taken for duplicate credit)

**GE431 Geography of American Indians** 3c-0l-3sh
Focuses on the historical/cultural geography of Native Americans. Population, resources, land use, development, settlement patterns, and other selected topics are covered.

**GE432 Geography of Crime** 3c-0l-3sh
The geographical context of crime is examined from historical and contemporary viewpoints. Relevant concepts and analytical approaches are introduced.

**GE440 Conservation: Environmental Analysis** 3c-0l-3sh
Problems of exploitation and utilization of regional resources such as soils, minerals, forests, and wildlife are considered in relation to population growth and regional planning and development.

**GE464 Land Use Policy** 3c-0l-3sh
Introduces students to and provides an overview of land use issues at the regional, state, and federal levels. Emphasis is placed upon the evolution of contemporary policy strategies. constitutional issues, and regional controversies involved in the regulation of metropolitan growth, central city decline, and management of public lands. (Also offered as RP464; may not be taken for duplicate credit)

**GE481 Special Topics** 3c-0l-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students. (May also be offered as RP481; may not be taken for duplicate credit under same title)

**GE482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**GE493 Internship** var-3-12sh
Professional learning experience with emphasis on application of academic background. Open to majors and minors in geography with a total of 57 semester hours and 15 hours in the major. See internship supervisor for additional information.

**GE499 Independent Study** var-3-6sh
Independent research and study under faculty direction. Interested students should approach department chairperson for information.

## GK Greek
Department of Spanish and Classical Languages
College of Humanities and Social Sciences

**GK151 Greek I** 3c-0l-3sh
For beginning students; pronunciation, reading, oral, and written communication are the objectives. In grammar the case system of the Greek noun is begun. All classical Greek courses are offered occasionally through Independent Study; Modern Greek may be available through the Critical Languages program. Offered only by individualized instruction.

**GK152 Greek II** 3c-0l-3sh
Continuation of Greek I. In grammar the case system of the Greek noun is completed. Offered only by individualized instruction.

**GK251 Greek III** 3c-0l-3sh
Continued training in basic skills, with the possible addition of the study of specific topics; consult the department for topics of interest. In grammar most tenses of the Greek verb are studied. Offered only by individualized instruction.

**GK252 Greek IV** 3c-0l-3sh
Continuation of Greek III. In grammar more tenses of the verb are studied. The readings become short selections from Greek literature. Offered only by individualized instruction.

**GK351 Advanced Greek Language I** 3c-0l-3sh
Reviews grammar in depth; analyzes the structure of the language. While themes are not required, selections from Greek prose are read both for knowledge of their content and for developing knowledge of the structure of the language. Offered only by individualized instruction.

**GK352 Advanced Greek Language II** 3c-0l-3sh
Continuation of GK351. Selections are from poetry this semester. Offered only by individualized instruction.

**GK482 Independent Study** var-3sh
An opportunity to engage in an in-depth analysis of some topics dealing with the Greek language and culture through consultation with a faculty member. Permission required.

## GM German
Department of German
College of Humanities and Social Sciences

**GM151 German I** 3c-0l-3sh
For beginners, the objectives include grammar, pronunciation, reading, speaking, and writing.

**GM152 German II** 3c-0l-3sh
For students who have had German I or its equivalent, the objectives are to enhance and develop the four skills of listening, speaking, reading, and writing.

**GM221 Conversation III** 2c-0l-2sh
Two-hours-weekly conversation practice in small groups emphasizing the use of greetings, idiomatic expressions, and communication skills to improve vocabulary and pronunciation.

**GM222 Conversation IV** 2c-0l-2sh
Two hours of weekly conversation designed as a continuation of the practice in small groups, focusing on speaking and listening skills and on participation in discussions and dialogues. May enroll without having taken GM221.

**GM251 German III** 3c-0l-3sh
Continued training in basic skills, with the possible addition of the study of specific topics; consult the department for topics of interest.

**GM252 German IV** 3c-0l-3sh
Continuation of German III with some emphasis on literary works.

**GM253 Intermediate Composition and Conversation** 3c-0l-3sh
Can be taken instead of or in addition to 252. Designed for majors or serious students. Offered in spring only.

**GM254 Business German** 3c-0l-3sh
**Prerequisite:** GM251 or equivalent
A one-semester course which can be taken instead of, or in addition to, GM252 by students interested in business or as part of the General Education requirement (equivalent to German IV). Business practices and specialized business vocabulary, letter writing, and problems of translation are emphasized.

**GM256 Scientific German** 3c-0l-3sh
Designed to substitute for GM252, course will be offered in the second semester. Primarily for science majors, it may be taken as an elective by German majors.

**GM281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**GM321-322 Advanced Conversation I and II** each 2c-0l-1sh
Designed to increase speaking ability. The variety of content permits repetitions of these relatively informal courses.

**GM351 Advanced German Language I** 3c-0l-3sh
Aims to review and expand the student's grammatical skills, to apply these skills to extensive cultural and short literary readings, and to produce frequent themes on these readings.

**GM352 Advanced German Language II** 3c-0l-3sh
Continues to expand the student's grammatical skills and to apply them by the writing of longer themes based on cultural and literary readings.

**GM361 Development of German Culture and Literature I** 3c-0l-3sh
Designed to provide a background in German literature, music, art, architecture, and history. Surveys the period from the migrations of the Germanic tribes to the rise of Prussia as a European power.

**GM362 Development of German Culture and Literature II** 3c-0l-3sh
A continuation of GM361. Covers the period from the French Revolution and its effects on Germany up to the present, with an emphasis on German literature, history, and music.

**GM363 Introduction to German Literature I** 3c-0l-3sh
Selected readings in German poetry to acquaint the student with formal and thematic aspects of German verse from the Middle Ages to the present.

**GM364 Introduction to German Literature II** 3c-0l-3sh
Selected readings in German fiction and drama to acquaint the student with representative works and techniques of interpretation.

**GM367 Nineteenth-Century German Literature** 3c-0l-3sh
A survey of the major works of German poetry and prose with an emphasis on the literary movements of Romanticism. Realism, and Naturalism.

**GM368 Twentieth-Century German Literature** 3c-0l-3sh
A study of representative works of German poetry and prose from Expressionism through World War II.

**GM369 Contemporary German Literature** 3c-0l-3sh
A study of the literary achievement of postwar Germany up to the present.

**GM370 The Age of Goethe I** 3c-0l-3sh
A study of representative works from the Enlightenment and Storm and Stress periods.

**GM371 The Age of Goethe II** 3c-0l-3sh
A study of selected works of German Classicism with an emphasis on the prose and poetry of the first decades of the nineteenth century.

**GM381 German Drama in English Translation** 3c-0l-3sh
Representative works of major dramatists in English translation. Primarily intended for students of English literature and comparative literature and not considered as credit toward a German major.

**GM410 History of the German Language** 3c-0l-3sh
History and development of German language, with special emphasis on relationships with English. Analysis of annals in Gothic, Old High German, and Middle High German using methods of historical and contemporary linguistics.

**GM481 Special Topic** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students. Designed to meet the special needs of a student group.

**GM482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
An opportunity to engage in an in-depth analysis of some topic dealing with the German language and culture through consultation with a faculty member.

**GM493 Internship in Germany** var-3-12sh
**Prerequisites:** 12 credits in 300- or 400-level courses and a minimum of one semester study in Germany
A supervised field experience in Germany with approved public agencies and institutions or private firms; no longer than one semester and no less than one month. Positions will be matched as closely as possible with the intern's personal interests and degree of proficiency in the German language. Academic work at the Gesamthochschule in Duisburg must precede the internship. Open to students in other disciplines, such as Political Science, International Relations, Business, etc.,

## GN Gerontology
Department of Allied Health Professions Program
College of Health and Human Services

**GN281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**GN481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content.
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**GN482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**GN493 Internship** 3sh
**Prerequisites:** Senior standing, all required courses
Supervised experience in public or private agency that serves aging clients.

## GS Geoscience
Department of Geoscience
College of Natural Sciences and Mathematics

**GS101 The Dynamic Earth** 3c-0l-3sh
**Prerequisite:** No Geoscience majors/minors
Examines the constant changes that affect the rocky surface of our planet. From volcanic eruptions and catastrophic earthquakes to the slow drift of continents and passage of ice ages, earth processes have shaped the history of life and altered the development of human civilization.

**GS102 The Dynamic Earth Lab** 0c-2l-1sh
**Prerequisite:** No Geoscience majors/minors
Corequisite: Enrollment in GS101
Introduces students to the techniques geologists use to study the earth and reconstruct its past. Labs cover minerals, rocks, map interpretation, fossil identification. Includes field trips during the scheduled lab period.

**GS103 Oceans and Atmospheres** 3c-0l-3sh
**Prerequisite:** No Geoscience majors/minors
The earth's oceans and atmosphere play a crucial role in determining the pace and extent of changes occurring to our global environment. This course will examine the composition and character of these components and their interaction with other major components of the earth system.

**GS104 Oceans and Atmospheres Lab** 0c-2l-1sh
**Prerequisite:** No Geoscience majors/minors
Corequisite: Enrollment in GS103
Introduces students to the techniques oceanographers and meteorologists use to study the earth's oceans and atmospheres and reconstruct their evolution. Labs cover seawater processes, oceanic circulation, marine life, atmospheric structure, and weather.

**GS105 Exploring the Universe** 3c-0l-3sh
**Prerequisite:** No Geoscience majors/minors
Examines the history of time, the reasons for the seasons, the characteristics of the planets, moons, stars, and galaxies, and the history and future of space exploration.

**GS106 Exploring the Universe Lab** 0c-2l-1sh
**Prerequisite:** No Geoscience majors/minors
Corequisite: Enrollment in GS105
Introduces students to the techniques astronomers use to study the celestial sphere. Constellations, seasons, motions of Sun, Moon, planets, and stars, characteristics of stars and galaxies. Includes two observations which will be held at night.

**GS111 Earth Science for Educators I** 3c-0l-3sh
**Prerequisite:** Natural Science/Science Education majors only
An in-depth treatment of introductory oceanography and geology designed specifically for Secondary Science Education majors. Focuses on fundamentals of the earth's physical processes and history and on the ocean's dynamics, chemistry, and tectonics.

**GS112 Earth Science for Educators I Lab** 0c-3l-1sh
**Prerequisite:** Natural Science/Science Education majors only
**Corequisite:** Enrollment in GS111
Lab experiences in various aspects of oceanography and geology, designed to provide concepts and skills for future teaching to Secondary Education majors. Includes field trip(s).

**GS113 Earth Science for Educators II** 3c-0l-3sh
**Prerequisite:** Natural Science/Science Education majors only
An in-depth treatment of introductory meteorology and astronomy designed specifically for Secondary Science Education majors. Focuses on atmospheric processes and climate change and on the earth's place in the solar system and universe.

**GS114 Earth Science for Educators II Lab** 0c-3l-1sh
**Prerequisite:** Natural Science/Science Education majors only
**Corequisite:** Enrollment in GS113
Use of the weather station and planetarium highlights a series of exercises designed to aid Secondary Science Education majors in developing concepts and laboratory skills for future teaching.

**GS121 Physical Geology** 3c-0l-3sh
**Prerequisites:** Geoscience majors/minors, any Science or Science Education majors/minors; Anthropology, Geography/Regional Planning majors, or permission of instructor
Introduction to the science of the earth, including physical properties of its interior and crust; its tectonic and surface processes; and the complex geologic interactions which shape and modify our planet. Designed to prepare students for upper-level geology classes.

**GS122 Physical Geology Laboratory** 0c-3l-1sh
**Prerequisites:** Geoscience majors/minors, any Science or Science Education majors/minors; Anthropology, Geography/Regional Planning majors, or permission of instructor
**Corequisite:** Enrollment in GS121
Selected problems in rock and mineral identification, topographic and geologic mapping techniques, geologic landforms and deformation structures. Designed to prepare students for upper-level geology classes. Includes field trips.

**GS131 Historical Geology** 3c-0l-3sh
**Prerequisites:** Geoscience majors/minors, any Science or Science Education majors/minors; Anthropology, Geography/Regional Planning majors, or permission of instructor
Introduction to history of the earth, including the fossil record and the history of biologic evolution; the growth and tectonic interactions of oceans and continents; and the physical evolution of the earth's atmosphere, lithosphere, and hydrosphere. Designed to prepare students for upper-level geology classes.

**GS132 Historical Geology Laboratory** 0c-3l-1sh
**Prerequisites:** GS121/122, Geoscience majors/minors, any Science or Science Education majors/minors; Anthropology, Geography/Regional Planning majors, or permission of instructor
**Corequisite:** Enrollment in GS131
Selected problems in stratigraphic analysis, paleontology, and structural geology; designed to prepare students for upper-level geology classes. Includes field trips.

**GS141 Introduction to Ocean Science** 3c-0l-3sh
Introduction to physical, chemical, biological, and geological processes in oceanography and the interactions among them. Impact of exploitation of the oceans, coastal areas, marine, physical, and living resources on the environment and on humankind. Includes field trips which may involve a fee and may occur on weekends.

**GS150 Geology of National Parks** 3c-0l-3sh
A study of geological processes and earth history as documented by the classical geological features of U.S. and Canadian national parks. Includes Badlands, Glacier, Grand Canyon, Great Smokies, Gros Morne, Mammoth Cave, Yellowstone, Yosemite, and others. Not open to Geoscience majors or minors.

**GS151 The Age of Dinosaurs** 3c-0l-3sh
A thorough introduction to dinosaurs and the world they inhabited. Topics include the most current theories regarding dinosaurian biology (behavior, metabolism, evolution), ecology (greenhouse climate, associated plants and animals), and extinction (asteroid impact, volcanism, climate change). Not open to Geoscience majors and minors.

**GS221 Physical Resources of the Earth** 3c-0l-3sh
Introduction to mineral, energy, and water resources of the earth; genesis of ore depositions; exploration, exploitation, and utilization of resources; impact of exploitation of resources on the environment and on humankind. Includes field trips which may occur on weekends.

**GS281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**GS310 Environmental Geology** 2c-3l-3sh
**Prerequisite:** 8sh in geology or permission
The application of geologic information to the accommodation and reduction of natural hazards, to land-use planning, and to the utilization of earth materials. Includes field trips which occur on weekends.

**GS321 Mineralogy** 2c-3l-3sh
**Prerequisite:** GS121 or CH111
Concerned with properties of minerals; introduction to crystallography and chemistry of crystals, followed by a determination of minerals and their probable genesis. Includes field trips which may occur on weekends.

**GS322 Igneous and Metamorphic Petrology** 2c-3l-3sh
**Prerequisite:** GS321
Concerned with a description of igneous and metamorphic rock character based upon mineral components and physical relationship between mineral components of a rock. Includes field trips which may occur on weekends.

**GS325 Structural Geology** 2c-3l-3sh
**Prerequisites:** GS131 and 132/133 or permission of instructor
Study of primary structures, contacts, rock mechanics, joints, faults, folds, foliation, and lineation. Includes work with geologic maps and structure sections. Brunton compass, orthographic and stereographic projections. Includes field trips which may occur on weekends.

**GS326 Field Geology** 2c-3l-3sh
**Prerequisite:** GS325
Principles and techniques of field geology with emphasis on developing field skills using Brunton compass, aerial photographs, topographic maps, altimeter, Jacob staff, and rock color charts. Field projects involve techniques of field note-taking, measuring and describing stratigraphic sections, geologic field mapping and analysis, construction of geologic maps and structure sections, and report writing. Includes field trips which may occur on weekends.

**GS327 Geomorphology** 2c-31-3sh
**Prerequisites:** GS121, 131
A study of the origin of the earth's land forms, including relationship of geologic structure to landform types and role of geomorphic processes in landscape development.

**GS330 Paleontology** 2c-3l-3sh
**Prerequisite:** GS131 or permission of instructor
Study of the morphology, evolution, geologic significance, and paleoecology of fossil organisms. Includes field trips which may occur on weekends.

**GS331 Hydrogeology** 2c-3l-3sh
**Prerequisites:** MA121-122, GS121-122/123, or permission
An overview of groundwater geology, including flow equations, graphical solutions to flow problems, and computer modeling of flow systems, as well as the geotechnical and social implications of groundwater utilization. Includes field trips which occur on weekends.

**GS332 Geochemistry** 2c-3l-3sh
**Prerequisite:** CH111-112, GS121-122/123, or permission
Introduction to low-temperature chemistry of the earth's surface and near-surface; includes discussions of chemical activity, solution chemistry, organic geochemistry, trace elements, isotopes, and the chemistry of natural waters.

**GS336 Geology of the Northern Rockies** var-3sh
**Prerequisite:** Permission of instructor
A field study of the major geologic features and relationships involved in the development of the northern Rocky Mountains. National Park and Monument areas of South Dakota, Wyoming, and Montana are included among the areas investigated. (three weeks, summer only)

**GS337 Geology of Newfoundland** var-3sh
**Prerequisite:** Permission of the instructor
A field course designed to utilize the exceptional and diverse geologic features of Newfoundland for instruction of departmental majors and minors in tectonic analysis utilizing sedimentologic, stratigraphic, and paleontologic observations. (three weeks, summer only)

**GS338 Geology of the American Southwest** var-3sh
**Prerequisite:** Permission of instructor
A field study of the major geologic features and relationships exposed in the American Southwest, including the Colorado Plateau, the Rio Grande Rift, Death Valley, and parts of the Southern Rocky Mountains. (3 weeks, summer only)

**GS341 Solar System** 2c-3l-3sh
**Prerequisites:** MA121 and PY111
Fundamentals of astronomy, with emphasis on observational methods, mechanics, and origin of the solar system and spatial relationship of the solar system to the other members of the universe.

**GS342 Stellar Astronomy** 2c-3l-3sh
**Prerequisites:** MA121 and PY111
Fundamentals of astronomy, with emphasis on sun, stars, galaxies, the sidereal universe, and use of spectroscopy for gathering astronomical data.

**GS350 Operation of the Planetarium** var-1sh
**Prerequisites:** GS110, 341, 342, or permission of instructor
Designed to acquaint the student with methods of operation and repair of a Spitz A-3-P planetarium. Content includes topics suitable for lectures to various age groups. Student will write and present a demonstration program. Meets once a week with occasional evening observations.

**GS361 Physical Oceanography** 2c-3l-3sh
**Prerequisites:** PY111 and MA121 or permission of instructor
Introduction to physical, chemical, geological, and biological nature of ocean: topography, submarine geology, and bottom deposits. Includes field trip(s) which may occur on weekend(s).

**GS362 Plate Tectonics** 2c-3l-3sh
**Prerequisites:** PY111-112 and a minimum of 20sh of geology
Introduction to formal theory of plate tectonics. Topics include magnetic anomalies, first motion studies, thermal structures of the plates, kinematics, crustal generation, sea floor spreading, collision, and subduction deformation. Prior to 1988 was titled Marine Geology and Plate Tectonics.

**GS371 Meteorology I** 2c-3l-3sh
**Prerequisite:** One year of physical science or physics
Introduction to meteorological sciences; composition and structure of the atmosphere; radiation principles; elementary thermodynamics and heat balance.

**GS380 Research Techniques in Geoscience** 2c-0l-2sh
**Prerequisite:** Second-semester junior standing (75 credits or permission of instructor)
For students majoring in some aspect of geoscience. Teaches students the techniques of geoscience research: defining a project; doing background research; proposing multiple working hypotheses and collecting evidence pertaining to each. Students will then write up their research in both abstract and professional manuscript format. Cannot be taken subsequent to GS480.

**GS411 Sedimentary Petrology** 2c-3l-3sh
**Prerequisite:** GS321 or permission of instructor
Study of sediments and sedimentary rocks with emphasis on interpreting ancient environments of deposition utilizing sieve analysis, hand lens, and petrographic microscope. Includes field trips which may occur on weekends.

**GS412 Stratigraphy** 2c-3l-3sh
**Prerequisite:** GS411 or permission of instructor
Principles and processes involved in development and description of stratified rock sequences, principles and problems of correlation, and selected stratigraphic problems. Includes field trips which may occur on weekends.

**GS440 Subsurface Geology** 2c-3l-3sh
**Prerequisite:** Minimum 20 credit hours of geology
An introduction to the geology of petroleum, its origin, migration, entrapment, and production. Lab is designed to provide practical experience in subsurface mapping techniques and the use and evaluation of geophysical logging devices. Includes field trips which may occur on weekends.

**GS441 Carbonate Geology-Florida** var-3sh
**Prerequisite:** 17sh geology courses or written permission of instructor
Two to three weeks of field study in Florida Keys. Course will be conducted from base camp in Florida Keys and will consist of both land and water work as the different carbonate environments in the Keys, Florida Bay, and the Atlantic reef tract are studied.

**GS480 Geoscience Seminar** var-1sh
For seniors majoring in some aspect of geoscience. The seminar (1) provides the student with an opportunity to prepare, formally present, and defend a scientific paper based either on his/her own research or on a topic chosen with the approval of instructor and (2) provides opportunity to discuss topics presented by other students, faculty, or guests.

**GS481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
It is the department's intention to use this course to schedule extended field trips and for teaching special courses which will utilize the specialties of the Geoscience faculty.

**GS482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Independent study provides the student with an opportunity to use library, laboratory, or field research in an area which is of interest under the supervision of a designated faculty member. Approval is based on academic appropriateness and availability of resources.

**GS493 Geoscience Internship** var-1-12sh
Summer or semester work experience with cooperating firms or agencies. May be scheduled only after consultation with advisor and chairperson. Requirements include up to three on-site consultations, depending on credit hours and location's site; completion of up to three oral progress reports; and submission of a detailed work diary. Restricted to junior and senior department majors; only three credits may be applied toward major.

## HE Home Economics Education
Department of Human Development and Environmental Studies
College of Health and Human Services

**HE218 Child Development** 3c-0l-3sh
**Prerequisite:** PC101
Focuses on the normal development and behavior of children. Survey made of physical, emotional, social, and intellectual development of children from conception through early adolescence. Pertinent child development research analyzed.

**HE220 Teaching in Child Development Centers** 2c-4l-4sh
**Prerequisite:** HE218 or equivalent
Techniques in planning for and teaching preschool children. Participation as teacher-assistant provides experience in applying principles of child guidance and development needed by teachers in preschool centers or secondary school child development laboratories.

**HE224 Marriage and Family Relations** 3c-0l-3sh
**Prerequisite:** PC101
Focuses on principles of human relations basic to marital decisions and adjustment. Influence of community and family experiences on personal development and adjustment explored.

**HE250 Introduction to Teaching Vocational Home Economics Education** 3c-0l-3sh
Overview of philosophy and organization of home economics profession and the role of home economics teachers. Opportunities for planned observations and varied teaching experiences using a variety of resource materials are provided. Self-evaluation relative to desirable teacher competencies is stressed.

**HE281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**HE317 Infant Development** 2c-2l-3sh
**Prerequisite:** HE218
Study of characteristic developmental changes of human infants from birth to approximately two and a half years. Participation as teacher assistant in infant/toddler child care center provides experience in developmentally appropriate guidance and planning for very young children.

**HE321 Preschool Education** 3c-0l-3sh
**Prerequisite:** HE220 or concurrently
Examination of the child development philosophy as the basis for developmentally appropriate decisions and methods in preschool education programming. Emphasis is placed on play as a developmental process and as the major aspect of the preschool curriculum. May not be interchanged with EL353: Preschool Education.

**HE324 Family Dynamics** 3c-0l-3sh
**Prerequisite:** HE224 or equivalent
Emphasis on processes and models of family development topics. Focus on approaches and dynamics of principles related to familial and marital adjustment and coping.

**HE350 Teaching Family Life Education** 3c-0l-3sh
**Prerequisites:** HE250, ED242
**Corequisite:** EP302
Emphasis on teaching family life education in home economics classrooms and through community organizations and agencies. Lessons are planned and implemented using a variety of instructional methods incorporating adaptations and modifications for special needs learners, basic skills, global concerns, and use of a problem-solving/decision-making approach. Planning of content, learning activities, instructional materials, and evaluation based on clearly stated objectives are emphasized. A microcomputer spreadsheet is utilized to manage a department budget and a gradebook. Participation in professional organization activities is expected.

**HE418 Advanced Child Development** 3c-0l-3sh
**Prerequisite:** HE218
Study of trends and research in the field of child development based on a review of major theorists and current literature.

**HE420 Practicum in Child Development** 1c-10l-6sh
**Prerequisites:** Senior standing and HE220 and HE321
The intensive practicum provides in-depth practical advanced laboratory experiences designed to refine and further develop the techniques and skills needed by professionals to work with young children and families.

**HE422 Early Childhood Education** 3c-0l-3sh
**Prerequisite:** HE220 or concurrently
Current educational theories and research reviewed in terms of implication for preschool and their effect on material, equipment, and activity selection.

**HE424 Family Issues** 3c-0l-3sh
**Prerequisite:** HE224
Concentrated study of selected areas of family life, with emphasis on current personal and social issues affecting the family.

**HE426 Techniques of Parent Education** 3c-0l-3sh
**Prerequisite:** HE220 or equivalent
Examination of nature, extent, and significance of parent education. Interrelationships of home, school, and community agencies are examined in light of various programs, methods, and techniques of parenting education.

**HE427 Administration of Child Development Centers** 3c-0l-3sh
**Prerequisites:** HE220 or equivalent, juniors or seniors only
Development of special knowledge and competencies needed by successful administrators of child care programs including proposal writing, budgeting, management, staff selection and training, appropriate curriculum materials, philosophy, parent involvement, child advocacy, and program evaluation.

**HE430 Student Teaching Practicum** 1c-0l-1sh
Taken concurrently with ED431 and 441. Assists student teachers in analyzing problems and experiences encountered during student teaching. Emphasizes the variety and types of home economics programs and focuses on developing effective teaching strategies (four sessions of three and a half hours during the semester).

**HE450 Teaching Vocational Home Economics** 3c-0l-3sh
**Prerequisite:** HE350
Emphasis is on teaching vocational home economics in consumer/homemaking and occupational home economics programs. Federal legislation impacting on home economics is analyzed for use in program decisions. Emphasis is given to program development using CBVE model, development of individual learning packets, vocational youth organizations, advisory committees, home economics and vocational educational priorities, professional organizations, proposal development for funding, impact on public policy, marketing home economics, and development of a personal philosophy of homes economics education.

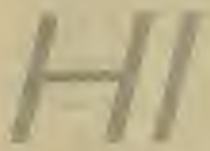
**HE455 Home Economics Programs for Individuals with Special Needs** 3c-0l-3sh
**Prerequisite:** EX300
Application of vocational regulations and public laws in relation to individuals with special needs. Developing home economics programs (planning, methods, strategies, and resources) for individuals with special needs applicable to school and nonschool settings.

**HE463 Family and the Community** 3c-0l-3sh
Study of community agencies and problems that affect families and their contributions to community. Investigation of ways group dynamics, communication media, and other resources aid understanding of human behaviors. Field experience is an integral part of the course.

**HE481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**HE482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Upper-level students with high scholastic achievement pursue their particular interests outside the realm of the organized home economics education curriculum. May be taken more than once to a maximum of 3 semester hours. Approval is based on academic appropriateness and availability of resources.

**HE493 Internship** var-6-12sh
**Prerequisites:** Permission of department, college dean, and university internship coordinator; upper-level standing
Practical experience related to the student's major area of study. Objectives are developed individually in consultation with university faculty member who supervises the internship. Log and major paper required. May be repeated up to a total of 12 semester hours; however, these semester hours are not applicable toward the 124 semester hours required for graduation if student receives 12 semester hours in student teaching.



## History
Department of History
College of Humanities and Social Sciences

**HI195 The Modern Era** 3c-0l-3sh
Interprets the development of two centers of civilization, Europe and America, within a global context and extends from at least the Age of Enlightenment through the present. (Majors should substitute HI202 for HI195 to meet the Liberal Studies humanities requirements.)

**HI200 Introduction to History** 3c-0l-3sh
For history majors and concentrates. Topics include philosophy of history, important schools of history and historians, and methods of historical research. Student is encouraged to become a better historian and to identify with historical profession. For History majors only.

**HI201 Western Civilization Before 1600** 3c-0l-3sh
Survey course presenting in various forms the origin and development of major political, social, religious, and intellectual institutions in Western Civilization to approximately 1600. For History majors or by instructor's permission.

**HI202 Western Civilization Since 1600** 3c-0l-3sh
Development of Western civilization from the expansion of Europe to the present, including political, diplomatic, economic, social, and cultural areas. Introduces issues and interpretations encountered in upper-level courses. For History majors or by instructor's permission.

**HI203 United States History for Historians** 3c-0l-3sh
Introduces aspiring historians to United States history since 1763. Emphasizes the issues, methods, and problems that currently concern professional historians. For History majors or by instructor's permission.

**HI210 Ancient Civilization: The Middle East and the Eastern Mediterranean** 3c-0l-3sh
An examination of the development and the spread of ancient civilization in ancient Middle East and the Eastern Mediterranean. Topics of study will include the characteristics of civilization and the development of political, social, economic, and cultural institutions in the river valley centers and the diffusion to the fringe areas. (Course designed for nonmajors)

**HI212 Ancient and Medieval Europe** 3c-0l-3sh
An examination of the development of civilization in Europe during the ancient and medieval periods. The course will focus on the Ancient Greek and Roman civilizations and the medieval European civilization. The characteristics and institutions of civilization will be stressed as well as the political history.

**HI214 Themes in American History** 3c-0l-3sh
**Prerequisite:** HI195
Open only to non-History majors. Designed to give students an appreciation of the basic themes and issues in the making of American society. Students will examine themes such as the fruition of democracy, the American dream, slavery and freedom, the tensions between liberty and order, and the role of the United States in a world setting.

**HI281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**HI301 History of Ancient Greece** 3c-0l-3sh
Will analyze major political, social, and economic developments in ancient Greek civilization from Bronze Age to death of Alexander.

**HI302 History of Ancient Rome** 3c-0l-3sh
Will trace Roman history from early Republic down to fall of Empire. Roman political theory will be particularly emphasized.

**HI303 Medieval Europe I, 400-1000** 3c-0l-3sh
History of early Medieval Europe, from decline of Rome to beginnings of High Middle Ages; emphasis on political, social, economic, religious, and intellectual developments.

**HI304 Medieval Europe II, 1000-1300** 3c-0l-3sh
History of late Medieval Europe, from High Middle Ages to Renaissance period; emphasis on political, social, economic, religious, and intellectual developments.

**HI305 Renaissance and Reformation** 3c-0l-3sh
History of Europe from c. 1250; rise of commercial city, kings, and pressures on Christian Church to 1600. Some consideration of technology and voyages.

**HI306 Early Modern Europe** 3c-0l-3sh
Greatness of France under Louis XIV; Sweden; Thirty Years' War. Emergence of modern society: French Revolution.

**HI307 History of Europe: 1815-1914** 3c-0l-3sh
Study of Europe in 19th century, with emphasis on the emergence of major thought patterns, Romanticism, Nationalism, Socialism, and Positivism.

**HI308 Twentieth-Century Europe** 3c-0l-3sh
Political, economic, and diplomatic trends in Europe since 1900, with major emphasis on causes and results of war and search for security.

**HI311 Rise and Fall of Hitler's Empire** 3c-0l-3sh
In-depth study of Hitler and the Nazi order; offers an analysis of nineteenth-century origins of Nazi ideology and intensively analyzes domestic and foreign totalitarian policy (1920-1945), including Holocaust, Resistance, and the postwar Nuremberg Trials.

**HI320 History of England to 1688** 3c-0l-3sh
Survey of the growth of the English nation, with emphasis on political, social, and economic developments leading to seventeenth-century conflict between Crown and Parliament.

**HI321 History of England, 1688 to Present** 3c-0l-3sh
Survey of the growth of England as a democratic constitutional monarchy. Attention directed to industrial revolution and to imperial expansion and England's role in twentieth-century world. Attention given to social and cultural history.

**HI322 French Revolution and Napoleon** 3c-0l-3sh
Brief sketch of Old Regime, concentration on Revolution and Empire, with emphasis on politics, social structure, diplomacy, and economics.

**HI324 History of Germany to 1848** 3c-0l-3sh
Study of the development of Germany politically and culturally from ancient times, emphasizing medieval and early modern periods to 1849.

**HI325 History of Germany: 1849 to the Present** 3c-0l-3sh
Study of the political and cultural development of modern Germany from the Revolution of 1848, including imperial, republican, and totalitarian phases, to post-World War II East and West Germany.

**HI326 History of Russia** 3c-0l-3sh
General survey of Russian history, culture, and institutions. Special consideration given to study of historical forces formative of Revolution of 1917.

**HI327 Soviet Union and Contemporary Russia** 3c-0l-3sh
Prerequisites: Sophomore standing, completion of HI195 (nonmajors)
Analyzes the period from 1855 to the present, including the attempts at modernization by Imperial Russia, the creation of the Soviet Union and further modernization, and the collapse of the Soviet Union.

**HI330 History of the Islamic Civilization** 3c-0l-3sh
An approach to learning about a non-Western culture: Muhammad, Arabs, and Muslims as creators of a great civilization from rise of Islam to 1800; emphasis on cultural institutions of Islam and their interrelationships within Middle East.

**HI331 Modern Middle East** 3c-0l-3sh
Survey of changes that have taken place in Middle East and in Islam since eighteenth century and of contemporary problems in that region.

**HI340 Colonial America** 3c-0l-3sh
Survey of original thirteen states from their inception as colonies within the British empire to 1763, the eve of Independence. Attention is given to their political development; economic position within the empire; relations with Indians; and evolution of social, educational, and religious life.

**HI341 American Revolution** 3c-0l-3sh
An examination of Whig-Tory participants of American Revolution. Examines events from 1763 to 1783. Changing interpretations of the causes and effects of the revolution will be discussed.

**HI342 The Early Republic** 3c-0l-3sh
Survey of United States history from 1783 to 1850, with special attention on constitutional, political, economic, and social trends.

**HI343 Civil War and Reconstruction** 3c-0l-3sh
Study of the failure of American democracy to cope with issues of mid-nineteenth century, followed by political, economic, military, and social developments during war and reconciliation of North and South.

**HI344 The Age of Big Business in America, 1877-1917** 3c-0l-3sh
Examines how big business developed in America, how the economic change reshaped society, and how the reshaped society responded politically.

**HI345 The Age of Ragtime: American History, 1900-1929** 3c-0l-3sh
Using the nation's cultural development as its thematic foundation, analyzes the transitional character of the Progressive Era, World War I, and the 1920s.

**HI346 Recent United States History** 3c-0l-3sh
Study of political, economic, and cultural changes in American life since 1929; examines roots of social problems facing us today. Some recent foreign policy trends also studied.

**HI350 History of Latin America Colonial Period, 1450-1820** 3c-0l-3sh
Study of life of people, Indian cultures, conquest by Spaniards and Portuguese, government during Colonial Period, and Wars of Independence.

**HI351 History of Latin America: National Period, 1820-Present** 3c-0l-3sh
Study of the history of nations which have emerged since independence; emphasis on economic, political, cultural, and social developments of these nations, as well as relationships of these nations to others in the hemisphere.

**HI355 African History I: Antiquity to 1600** 3c-0l-3sh
**Prerequisites:** Sophomore standing, completion of HI195 (nonmajors)
Survey of the sociocultural, political, and economic life of precolonial African societies. Focus is on ancient kingdoms and cultures, precolonial states, internal and Atlantic trade networks.

**HI356 African History II: 1600 to Present** 3c-0l-3sh
**Prerequisites:** Sophomore standing, completion of HI195 (nonmajors)
Survey of African sociocultural, political, and economic developments during the colonial and modern periods. Course covers imperialism, the struggle for control for Africa, the two global wars and their repercussions for Africa, decolonization, and modern African states.

**HI360 History of Pennsylvania** 3c-0l-3sh
Emphasizes the cultural, economic, political, and social development of our state in its various periods from colonial to today. Special attention given to diversity of Pennsylvania's people, their institutions and problems.

**HI361 History of American Diplomacy, 1775-1900** 3c-0l-3sh
Traces foreign relations of the United States from Independence to emergence as a world power. Topics concentrate on themes of commercial relations, political isolation, expansion, and debate over imperialism.

**HI362 History of American Diplomacy, 1900-present** 3c-0l-3sh
Treats primarily our twentieth-century involvement in world affairs and domestic debate over that involvement. Special emphasis will be placed on the role of interest groups and increasing power of Executive Department over foreign affairs.

**HI363 Thought and Culture in Early America** 3c-0l-3sh
Selected topics in early American intellectual and cultural growth, with emphasis on Puritanism, Enlightenment, cultural nationalism, and Romantic movement.

**HI364 Thought and Culture in Modern America** 3c-0l-3sh
Selected treatment of historical development of modern American movements in social and political thought, religion, philosophy, fine arts, and literature.

**HI365 History of Black America Since Emancipation** 3c-0l-3sh
Description and analysis of the role of blacks in the history of the United States since the Civil War; emphasis on key leaders, major organizations, leading movements, and crucial ideologies of blacks in modern America.

**HI366 African-American Women** 3c-0l-3sh
Major economic, social, and political issues which have affected black women since their introduction into North America to the present.

**HI367 Native American History** 3c-0l-3sh
An unfamiliar perspective on a familiar tale. This course presents the "new Indian History"—North America from Native American materials and points of view. Identification, analysis, and synthesis of Indian realities and options over time are at the heart of this course.

**HI369 Women in America** 3c-0l-3sh
A study of the activities of women from the colonial era to the modern era—evaluating cultural, societal, religious, economic, and political frameworks. Reviews women's involvement in movements for feminism, social reform, unionism, and the abolition of slavery.

**HI370 Religion in America** 3c-0l-3sh
A history of religious belief and practice in the United States from the colonial period to the present, with an emphasis on the last one hundred years.

**HI372 History of the Early American Working Class** 3c-0l-3sh
Description and analysis of the nature and significance of the working class of the United States in the eighteenth and nineteenth centuries. The work settings and communities of workers will be examined as well as unions such as the National Labor Union and the Knights of Labor.

**HI373 History of the Modern American Working Class** 3c-0l-3sh
Description and analysis of the nature and significance of the working class of the United States in the twentieth century. Work settings and strikes will be examined and analyzed as well as unions such as the United Mine Workers and the United Auto Workers and labor leaders including Samuel Gompers, John L. Lewis, and George Meany.

**HI374 History of Organized Crime** 3c-0l-3sh
This course studies the relationship between urban, entrepreneurial crime and the evolution of industrial America.

**HI390 History of Women—World Cultures** 3c-0l-3sh
Explores religious, legal, political, economic, and mythic dimensions of women in society from ancient to modern times, including Western and non-Western experiences.

**HI391 Film as History** 3c-0l-3sh
Particularly concerned with probing the relationship between cinema and society. History of film is explored and student is given some background in film interpretation and cinematography, the western, science fiction, police films, and great foreign and American detective films.

**HI480 Senior Seminar** 3c-0l-3sh
A regimen of research resulting in a written paper. Students work on a program selected by the instructor. For History majors or by instructor's permission.

**HI481 Special Studies in History** var-1-3sh
**Prerequisite:** As appropriate to course content
Each semester, courses are offered in interest areas that are not part of the regular program. Some examples of courses of this type are the Victorian Age, the History of Love, World War II, the Great Depression, the Adams Chronicles, and the History of New York City. Students may schedule as many of these courses as desired, but two per semester is the usual limit.

**HI482 Independent Study** var-3-6sh
**Prerequisites:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office with 12sh in history; a 3.0 history average; permission of a faculty member. Approval is based on academic appropriateness and availability of resources
Involves directed reading or research for qualified students. Experimental projects and personalized learning are encouraged.

**HI483 Independent Study** 3c-0l-3sh
An honors program within the independent study format. Minimum qualifications are a 3.0 QPA, 15sh of history, and a 3.2 average in history classes. Satisfactory honors work is rewarded by formal recognition at graduation.

**HI493 Internship** var-3-12sh
With departmental approval, students are attached to local or national government or private agencies doing directive, bibliographical, archival, or museum work. Advising professor meets with intern regularly and determines what papers or reports will be required.

## Health and Physical Education

Department of Health and Physical Education
College of Health and Human Services

**HP117 Fitness-Swimming** 0c-2l-1sh
Fundamentals and techniques of swimming and fitness.

**HP119 Golf-Bowling** 0c-2l-1sh
Fundamentals and techniques of golf and bowling.

**HP123 Folk and Square Dance I** 0c-2l-1sh
Fundamentals and techniques of folk and square dancing.

**HP124 Fitness Through Dance** 0c-2l-1sh
A physical fitness development course for men and women that employs a combination of exercises and dance techniques performed to music.

**HP126 Resistive Exercises** 0c-2l-1sh
Fundamentals and techniques of progressive resistive exercises.

**HP127 Fencing** 0c-2l-1sh
Fundamentals and techniques of fencing.

**HP128 Golf** 0c-21-1sh
Fundamentals and techniques of golf.

**HP134 Bowling** 0c-2l-1sh
Fundamentals and techniques of bowling.

**HP142 Foundations of Health, Physical Education, and Sport** 3c-0l-3sh
Historical, philosophical, and psychosocial foundations of health and physical education are introduced. Specific emphasis is given to scientific theories and principles in such areas as health promotion and behavioral change, exercise physiology, motor development, kinesiology, and motor learning.

**HP143 Health and Wellness** 3c-0l-3sh
Introduces the student to the major components of wellness: contemporary nutrition issues as they relate to personal food choices, physical fitness, stress management, sexually transmitted diseases, AIDS, and substance abuse. Completion of HP143 fulfills the Liberal Studies Health and Wellness requirement.

**HP145 Tennis** 0c-2l-1sh
Fundamentals and techniques of tennis.

**HP160 Downhill Skiing** 1sh
The cognitives and skills necessary for beginning downhill skiing.

**HP162 Scuba Diving** 0c-2l-1sh
Designed to teach necessary skills and proper use of equipment for underwater swimming. Tanks, regulators, weights, and special equipment furnished. Student must purchase a mask, fins, and snorkel (approximately $15). Includes theory as well as practical work.

**HP165 Lifeguarding** 0c-21-1sh
**Prerequisites:** Departmental consent and Advanced Swimmer
Designed for professional lifeguards. Includes lifeguarding techniques for pools and fresh and saltwater beaches. Red Cross certification (Pittsburgh Division) granted upon satisfactory completion of course requirements.

**HP166 Basic Smallcraft** 0c-2l-1sh
**Prerequisite:** Intermediate swimming ability
Designed to introduce the use of the canoe, paddle board, and sailboat. Emphasis is placed on the development of boating skills, safety rescue, and survival procedures. Red Cross smallcraft certification is granted upon successful completion of the course.

**HP167 Basic Synchronized Swimming** 0c-2l-1sh
**Prerequisite:** Intermediate swimming ability
Activity course designed to assist students in the development of beginning synchronized swimming skills. YMCA certification is granted upon successful completion of course requirements.

**HP200 Fundamentals of Physical Activity** 1c-2l-1sh
A foundation course designed for the purpose of training in the analysis and performance of the fundamental skills for subsequent motor behavior as they relate to games, sports, and dance. The opportunity to refine powers of observation through principles of efficient and effective movement fundamentals is provided. Individual data profile charts of performance will be completed for future reference.

**HP210 Motor Development** 2c-0l-2sh
**Corequisite:** HP200
A study of the processes of growth and development and their effects upon human motor behavior across the lifespan. Includes changes during physical growth, maturation and aging, and subsequent effects upon cognitive, perceptual, and physiological performance, both individually and within a sociocultural context.

**HP211 Dance, Rhythmic Activities, and Gymnastics** 4c-21-3sh
**Prerequisite:** HP200
Designed to provide an aesthetic and kinesthetic movement experience which will prepare the student as a teacher of basic movement in a variety of situations. The dance section will include creative movement, rhythms, and square, folk, and contemporary dance. Gymnastics will include basic tumbling, stunts, and apparatus skills.

**HP212 Team Sports** 4c-21-3sh
**Prerequisite:** HP200
Introduces students to the history, current status, and teaching similarities among team sports. Also includes materials and methods unique to each sport.

**HP213 Individual and Dual Sports and Adventure Activities** 4c-2l-3sh
**Prerequisite:** HP200
Provides historical and current status of individual and dual sports, as well as adventure activities. Includes skill development, analysis of skilled performance, and strategies for planning and implementing instructional programs.

**HP221 Human Structure and Function** 3c-0l-3sh
Anatomical organization of the human body, surveyed in sufficient depth to prepare students for physiology, biomechanics, and adaptive physical education.

**HP230 Aerobic Fitness** 1c-2l-2sh
An opportunity to participate in a variety of aerobic activities; will aid fitness leaders in developing and implementing several types of aerobic programs; will offer current information on aerobics as preventive medicine.

**HP242 Emergency Health Care** 1c-2l-1sh
American Red Cross Standard, Advanced, and Instructor's certification and Multimedia Instructor's certification awarded upon successful completion of this course.

**HP246 Biomechanics** 3c-0l-3sh
**Prerequisite:** HP221
Study of the relationship between mechanical and physical principles and human movement.

**HP251 Foundations of Safety and Emergency Health Care** 3c-0l-3sh
Focuses on accident prevention, injury control, and first responder's skills. Emphasizes identification of causes of accidents, recommended countermeasures, and mitigation. American Red Cross certifications are issued in (1) standard first aid, (2) community CPR, (3) instructor of standard first aid, and (4) instructor of community CPR.

**HP252 Introduction to the Driving Task** 2c-2l-3sh
Provides an in-depth treatment of operating a motor vehicle competently in all major variations and under most conditions encountered in traffic. A competent operator is one who performs the total driving task knowledgeably and skillfully and demonstrates full understanding and application of identification, prediction, decision, and execution process.

**HP261 Water Safety Instructor** 0c-2l-1sh
**Prerequisites:** Departmental consent and lifesaving certification
Emphasizes the teaching aspect of skills, techniques, and attitudes necessary in all areas of swimming. Students successfully completing course are qualified to hold such positions as waterfront directors, aquatic directors, and other similar positions.

**HP263 Aquatics** 0c-2l-1sh
Basic performance techniques in swimming strokes presented with special emphasis on teaching methodology, aquatic sports and games, water safety, skin diving, springboard diving, and other aquatic activities.

**HP264 Advanced Aquatics** 0c-2l-1sh
Swimming and rescue skills necessary to complete American Red Cross Senior Lifesaving Course. Emphasis placed upon a broad range of other aquatic experiences and teaching strategies.

**HP270 Instructor of Handicapped Swimming** 0c-2l-1sh
**Prerequisite:** HP261
Concerned with the learning of skills used to teach swimming to exceptional children. All handicaps are considered. This course is important not only in physical education but also for the mentally retarded, rehabilitation education, agency personnel, postgraduate swimming education, YMCA Boys Clubs, community programs, private clubs, and industrial programs. The Red Cross certification Instructor of Swimming for the Handicapped is granted upon successful completion of the course. Summer only.

**HP271 Instructor of Scuba Diving** 0c-2l-1sh
**Prerequisite:** HP262
Prepares instructors to teach skin and scuba diving. Emphasis is placed on teaching methods, use and mechanics of equipment, safety, diving physics and physiology, and advanced diving skills. Instructor of Scuba Diving certificate granted by the Professional Association of Diving Instructors upon successful completion of the course. Summer only.

**HP272 Instructor of Canoeing** 0c-2l-1sh
**Prerequisite:** HP266
Concerned with the learning of skills pertinent to teaching canoeing to beginners. All aspects of canoeing including paddling, repair of equipment, white water canoeing, safety, survival, and teaching techniques are presented. The Red Cross certification Canoeing Instructor is granted upon successful completion of the course. Summer only.

**HP273 Instructor of Sailing** 0c-2l-1sh
**Prerequisite:** HP266
Concerned with learning of skills pertinent to teaching beginning sailing. All aspects of sailing are considered, including the elements of sailing, repair of equipment, racing, safety, and techniques of teaching. Summer only.

**HP274 Instructor of Infants and Preschoolers in Swimming** 0c-2l-1sh
**Prerequisites:** HP261, instructor's consent
Methods course for preparation of swimming instructors in the knowledge and skills of teaching young children to swim. YMCA certification Instructor of the Very Young granted upon successful completion of course requirements. Summer only.

**HP276 Coaching of Swimming** 0c-2l-1sh
**Prerequisite: HP261**
A lecture-discussion methods course designed to prepare Physical Education majors for coaching of swimming. Emphasis is placed on training methods, officiating, nutrition, scientific principles, and meet strategy. Summer only.

**HP277 Coaching of Synchronized Swimming** 1c-2l-2sh
Designed to go beyond the activity nature of Basic Synchronized Swimming (HP267). Students are involved in set design, costumes, selection of music, making props, selecting themes, and organizing a program. Summer only.

**HP279 Swimming Pool Maintenance and Chemistry** 2l-0l-2sh
**Prerequisite: HP264**
A lecture-discussion course designed to teach fundamental water chemistry, filtration, treatment of water problems, winterization of outdoor pools, and pool management. Emphasis is placed on water testing and analysis of chemicals and bacteria. Summer only.

**HP280 Aquatic Facilities Management** 2l-0l-2sh
**Prerequisite:** HP264
An organizational and administrative course designed to prepare the aquatic professional for management of indoor and outdoor facilities. Includes facility design, safety procedures activity, and sport and recreational aspects. Summer only.

**HP281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**HP318 Preprofessional Experience I** 3c-0l-1sh
**Recommended Prerequisite:** HP321
**Prerequisite:** Physical Education majors only
Students teach as assistants to a faculty member in two different activities, one in physical education (general education) and one in elementary physical education at the University School. Emphasis on unit development, class management, leadership skills, and evaluation.

**HP319 Preprofessional Experience II** var-3sh
**Prerequisites:** Advanced standing, departmental approval
Students may request an assisting/teaching/leadership assignment in certain university-related areas that may be either instructional or noninstructional in nature. Examples of such professional areas are adaptives, recreation, dance, coaching, aquatics, intramurals, administration, elementary, service or major classes, club activities, and assisting in laboratory or the training room.

**HP321 Methods in Elementary Health and Physical Education** 3c-0l-3sh
**Prerequisite:** Junior standing
Guides the professional student in the development of competencies essential to teaching health and physical education at the elementary school level. Includes theories of instruction in health science, necessity of a safe and healthful school environment, and judicious utilization of school and community health resources and service, as well as study of theories of and movement relevant to elementary school children. Observation, materials, methods of teaching, and opportunities for intern teaching provided.

**HP325 School and Community Health** 3c-0l-3sh
**Prerequisite:** Junior standing
Introduces students to the role of school and community in protecting and promoting the health of its members. Topics include historical development of the concepts of health and health education, identification of national and community goals to reduce risk of disease and enhance health status, and the responsibilities of both school and community toward achieving these goals.

**HP333 Psychology of Coaching** 2c-0l-2sh
The goals of athletics in schools and communities: principles and responsibilities of the coach; current problems.

**HP335 Coaching and Managing of Athletic Programs** 3c-0l-3sh
Lecture course designed to prepare students for coaching or administering an athletic program. Emphasizes the professional preparation and responsibilities of a coach, the support and auxiliary personnel working under and with the coach, and the coach's responsibility to the athletes, plus the administrative responsibilities of coaching.

**HP341 Evaluation in Health and Physical Education** 3c-0l-3sh
**Prerequisite:** Junior standing
Evaluation theory, instructional objectives, and cognitive test construction; technical and practical considerations in testing and interpretation of test results in both health and physical education.

**HP343 Physiology of Exercise** 3c-0l-3sh
**Prerequisite:** HP221
Physiological effects of exercise in humans. Major factors of diet, conditioning, physical fitness, maximum performance level, and fatigue are considered.

**HP344 Adapted Physical Education** 3c-0l-3sh
**Prerequisite:** HP246
Recognition of structural deviations, corrective exercises, and physical education programs for a wide range of handicaps.

**HP345 Athletic Training I** 3c-0l-3sh
**Prerequisite:** HP221
Specifically designed to introduce students to the discipline of athletic training with emphasis in prevention, evaluation, management, and rehabilitation in sports medicine.

**HP346 Athletic Training Lab** 2c-0l-1sh
Should be taken concurrently with HP345
Provides sufficient opportunity for each student to develop proficient skills and techniques in the areas of evaluation, assessment, taping, and rehabilitation procedures.

**HP350 Health Aspects of Aging** 3c-0l-3sh
**Prerequisites:** PC101, SO151, and junior standing
Current theory and research related to gerontology will be introduced to increase students understanding of the physical and psychosocial dimensions of aging. Additionally, this course will emphasize lifestyle factors and disease prevention aspects of aging. Recommended for students who plan to work with older adults.

**HP353 Driver Education Program Management** 3c-0l-3sh
Emphasizes the development, organization, and management of high school driver education from the standpoint of its historical development to its present programs designed to meet the demands of the highway transportation system. Special emphasis on the role of the teacher in conducting a high-quality program that will meet with student, parent, school, and community approval.

**HP354 Application of Driver Education Instructional Modes** 2c-2l-3sh
**Prerequisites: HP251, 252, 353**
Prepares prospective driver education teachers to plan, teach, and evaluate the four modes of driver education (classroom, on-road, simulation, and multiple-vehicle range). Teaching high school students in supervised laboratory sessions is provided.

**HP372 Health and Physical Education for Special Populations** 2c-0l-2sh
**Prerequisite:** EX220; junior level or above
Methods and techniques of teaching health and physical education to special populations will be explored. Designed primarily for students majoring in special education, course will focus on handicapping conditions, limitations imposed by such conditions, and the responsibility of the special education teacher working in the physical education setting.

**HP375 Physiological Basis of Strength Training** 3c-0l-3sh
Designed to give the student the anatomical and physiological basis of muscle function. Students should also gain an understanding of changes that can be made through weight training and knowledge of programs that will bring about these changes. Opportunities for working with various types of equipment will be available.

**HP408 Guided Research Problem** var-2sh
**Prerequisite:** Permission of department chairperson
Selection and research of a problem pertinent to student interests and those of the professions of health, physical education, and recreation. Classes held on a seminar basis.

**HP410 Exercise Prescription** 3c-0l-3sh
**Prerequisite:** HP343
Designed to teach individuals to write exercise prescriptions based upon a subject's tolerance for physical activity. Special emphasis on risk factors, techniques of evaluation, drugs, injuries, environmental factors, and motivation and their role in physical activity assessment.

**HP411 Physical Fitness Appraisal** 3c-0l-3sh
Involves the selection, administration, and interpretation of various tests for appraising the physical fitness levels of individuals. Information given concerning the various fitness components, and discussions held so that each student gains an understanding of the variables to be tested.

**HP412 Physical Activity and Stress Management** 3c-0l-3sh
Acquisition of necessary understanding of anxiety and stress; their nature, place in society, and intervention strategies as they relate to physical activity.

**HP413 Physical Activity and Aging** 3c-0l-3sh
Presents major aspects of physical activity, its importance to the older adult, and the organization of an activity program. Attention to physiology of physical activity, effects of activity on growth and aging, exercise prescription, flexibility, overweight and obesity, and motivational strategies.

**HP426 Health Science Instruction** 3c-0l-3sh
Health curriculum—K-12, methods and media of instruction in health science.

**HP430 The American Woman and Sport** 3c-01-3sh
Comprehensive, multidisciplinary analysis of the problems, patterns, and processes associated with the sport involvement of girls and women in our culture. Presents historical perspective with an emphasis on physiological, psychological, and sociocultural influences.

**HP441 Psychosocial Implications for Health and Physical Education** 3c-01-3sh
**Prerequisite:** Senior standing
A study of psychological and sociological influences, both theoretical and empirical, and their effects upon health and physical performance.

**HP442 Seminar in Health, Physical Education, and Recreation I** 3c-0l-3sh
Theory and philosophy of health, physical education, and recreation; current issues and problems; innovative and creative programs.

**HP447 Cardiopulmonary Resuscitation (CPR) Instructor** 1c-1l-1sh
**Prerequisite:** Basic CPR certification
Study of methods and skills necessary to certify instructors of cardiopulmonary resuscitation and multimedia first aid. Successful completion of requirements leads to certification by the American Health Association and the American Red Cross. Summer only.

**HP450 Curriculum and Programming in Sexuality Education** 3c-0l-3sh
Topics include anatomy and physiology of the human reproductive tracts, development, birth defects, contraception, venereal disease, and abortion. Not for credit toward degrees in Biology.

**HP481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**HP482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**HP485 Student Assistance Program Training** 3c-0l-3sh
**Prerequisites:** Junior standing and EP202
Introduces the student to the concept of Student Assistance Programs(SAP) in schools. Includes the history of SAP, current involvement in public education, and the educator's role as a SAP member. Provides an experiential basis for preparation to assume the role of a SAP member.
Note: Majors in the B.S. in Education-Health and Physical Education program will have first opportunity to enroll in class; any openings in the class will then be offered to Elementary and Secondary Education majors.

**HP493 Internship** var-3-12sh
Educational opportunity which integrates classroom experience with practical experience in community service agencies or industrial, business, or governmental organizations. Junior standing required.

# HR Hotel, Restaurant, and Institutional Management

Department of Hotel, Restaurant, and Institutional Management
College of Health and Human Services

**HR101 Introduction to Hospitality Management** 3c-0l-3sh
Focuses on the development of the hospitality industry and career opportunities within hotel and restaurant chains and independents. Guest speakers address various hospitality management topics.

**HR115 Introduction to Tourism** 3c-0l-3sh
**Prerequisites:** HR101; majors only
Analyzes the economic and social impact of tourism, its promotion and implementation. Acquaints student with services needed by tourists, the role of the travel agent, and tourism organizations.

**HR245 Diversity and Multicultural Management in the Hospitality Industry** 3c-0l-3sh
**Prerequisite:** Sophomore standing
Course will explore what happens when diverse people work together in the hospitality industry. It will also examine the effects of international migration and the changing roles of women and other minorities which lead to multicultural urban centers within the United States and other hospitality venues. Furthermore, it will also focus on the cultural factors affecting productivity in the culturally diverse hospitality environment.

**HR259 Hospitality Purchasing** 3c-0l-3sh
**Prerequisite:** FN150 or equivalent
Includes sources, standards, grades, methods of purchase, and storage of various foods, beverages, and fixtures. Emphasis on the development of purchasing policies and specifications.

**HR281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**HR306 Food and Beverage Management** 3c-0l-3sh
**Prerequisite:** FN150 or equivalent
Examines principles, processes, beverage laws, and food and beverage service, sales, promotions, and menu design as functions of the food and beverage department.

**HR313 Food Systems I** 2c-var-4sh
**Prerequisites:** FN150, HR259, permission; professional chef's uniform required
A basic course in quantity food production with experience in planning, purchasing, preparing, and serving nutritionally adequate meals. Requirements of the National School Lunch program emphasized in satellite and on-premises food service. Requires some preparation and service outside regularly scheduled class time.

**HR350 Introduction to the Casino Industry** 3c-0l-3sh
**Prerequisites:** Sophomore standing or permission of the professor
Introduces the student to the multi-billion-dollar casino industry. It examines the gaming industry from a historical perspective and includes legal, social, and economic issues. It also reviews the various games played in casinos and the current trends, as well as the most popular casino destinations in the world. Special attention will be devoted to the growth of casinos on cruise ships, on Native American reservations, and on riverboats in the USA. This course includes a field trip to Atlantic City or another casino setting, which occurs on a weekend. This field trip serves as a catalyst to appreciate all of the theoretical concepts discussed in the lectures. (pending Council of Trustees approval)

**HR356 Human Resources in the Hospitality Industry** 3c-0l-3sh
**Prerequisites:** PC101, HR313
Organization and administration of hospitality business, including human resource theories and policies, work simplification, training, communication, and safety.

**HR358 Food Service Equipment and Facilities Design** 3c-0l-3sh
**Prerequisite:** HR313
Examines types and uses of food service production and service equipment with emphasis on incorporation into an effective facilities design. Field trips permit investigation of a variety of unit designs.

**HR360 Hotel Systems Management** 3c-0l-3sh
**Prerequisites:** HR356, IM241, AG201
Development and application of management skills as applied to the rooms division of a hotel. Emphasis on basic front desk procedures, rooms division departmental functions and relationships, and hotel facilities development. Students use MICROS 451 system in class.

**HR365 Hotel Design and Maintenance** 3c-0l-3sh
**Prerequisite:** HR356
Analyzes functions of housekeeping and maintenance departments within a hotel. Identification of various hotel design concepts and design characteristics are explored, as well as guest room layout and furnishing.

**HR401 Cost Management** 3c-0l-3sh
**Prerequisites:** HR356, 313
Food, beverage, and labor controls for hospitality or health care operations, including relationships between budgetary information and managerial decision making to meet financial needs.

**HR406 Catering and Banquet Management** var-3sh
**Prerequisites:** HR313, majors only; chef's uniform and wait-staff attire required
Profitable organization, preparation, and service of catered events in both on- and off-premises locations are the main emphases of the course. Requires meeting times other than listed in order to meet course objectives.

**HR408 Institutions Management** 3c-0l-3sh
**Prerequisites:** HR313, 356, AG201, senior standing
A compendium of the concepts of managing human resources, capital, materials, equipment, and markets as related to various hospitality property systems. Focus on concept development and managerial decision making.

**HR411 Seminar in Hospitality Management** 3c-0l-3sh
**Prerequisites:** HR360, 365
Analysis of the current trends and practices within hospitality industry as related by industry professionals. Course includes researching topics and writing at least three research papers. Carries writing-intensive credit.

**HR413 Food Systems II** 1c-6l-4sh
**Prerequisites:** HR313, 356, 401, and permission; professional chef uniform required
Food systems course with emphasis on restaurant and dining room operation. Experiences to include selection of classic cuisines, meal promotion methods, budget development, personnel training, production, and service.

**HR420 Hotel Sales and Services** 3c-0l-3sh
**Prerequisites:** BL235 and HR306
Examines the types of hotels, facilities, and organizations that hold conventions or meetings from the sales perspective. Examination of procedures necessary to service the group once in-house.

**HR433 Educational Study Tour** var-2-6sh
Comprehensive program of directed activities permits firsthand experiences in the historical and cultural aspects of the hospitality industry worldwide. Visits to renowned operations will be included in the tour.

**HR481 Special Topics** var-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**HR482 Independent Study in Hospitality Management** var-1-6sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. Must apply a semester in advance and have sixty earned credits.

**HR493 Internship in Hospitality Management** var-6-12sh
**Prerequisites:** 57 earned credits, 2.0 GPA, and completion of an approved 440-hour Work Experience I
An opportunity for students to work in a supervised experience directly related to the HRIM major. Must meet university and departmental internship requirements. Minimum of 440 hours required during the internship.

**Note:** White uniforms including white shoes are required for all lab courses where food is prepared. Students must meet the professional dress requirements of the department.

# IM

## Information Management
Department of Management Information Systems and Decision Sciences
Eberly College of Business

**Note:** All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

**IM101 Microbased Computer Literacy** 3c-0l-3sh
An introductory course designed to provide students with a fundamental understanding of computers. This course familiarizes students with the interaction of computer hardware and software. Emphasis is placed on the application of microcomputers, the use of productivity software (word processing, spreadsheet management, file and data base management), and the social and ethical aspect of the impact of computers on society.
**Note:** This course is cross-listed as BE101 and CO101. Any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

**IM201 Internet and Multimedia** 3c-0l-3sh
**Prerequisite:** BE/CM/CO/IM 101 or prior exposure to word processing and electronic mail
The major focus will be on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. This information literacy course is designed for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students will learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BE/CM/CO/IM/LB 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.)

**IM205 Foundations of MIS** 3c-0l-3sh
**Prerequisite:** BE/CO/IM101
An introductory course designed to provide students with a fundamental understanding of MIS. Systems theory, quality, decision making, and the organizational role of information systems are introduced. Information technology, including basic programming skills, is stressed. Concepts of organization, information system growth, telecommunications, and re-engineering are introduced. (pending Council of Trustees approval)

**IM241 Introduction to Management Information Systems** 3c-0l-3sh
Study of management information systems and their design and implementation. General systems theory, computer hardware, and programming are emphasized and then integrated to demonstrate how an MIS is developed. (Offered only at branch campuses after 1991-92)

**IM245 Introduction to Microcomputers** 3c-0l-3sh
Demonstrates how to utilize the microcomputer in business. Topics will include hardware, operating systems, word processing, spreadsheets, data base, and BASIC. Offered for Associate Degree Program only.

**IM251 Business Systems Analysis and Design** 3c-0l-3sh
**Prerequisite:** IM241 or 300
Involves teaching the tools and techniques required for the analysis and the design of business systems. The major steps in the system's development life cycle are presented along with practical applications from the major subsystems of typical business organizations. Issues related to personnel, hardware, software, and procedures are explored as students work individually and in project teams to solve typical business application problems.

**IM255 Business Applications in COBOL** 3c-0l-3sh
**Prerequisites:** AG201 and IM241 or 300
Introduces the student to the COBOL programming as it applies to business organizations and their applications. Structured COBOL concepts and methods are taught as the student learns how to solve business problems using computers. The student will be involved using files, reports, and tables to produce a variety of outputs utilized in operating and managing business activities.

**IM260 Business Computer Application Project** 3c-0l-3sh
**Prerequisite:** IM255
Provides each student an opportunity to utilize skills and concepts presented in previous COIS courses in the planning, design, and implementation of a comprehensive case study involving computerized business applications. Students will work in teams and individually in performing tasks that are necessary to solve each problem assigned. These tasks will include systems analysis, systems design, programming, testing, and implementing and documenting simulated business problems.

**IM281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**IM300 Information Systems: Theory and Practice** 3c-0l-3sh
**Prerequisites:** CO/BE/IM 101, AG202
Includes basic MIS concepts, fundamentals, and practices. Broad areas of coverage are principles, the computer as a problem-solving tool, Computer-Based Information Systems (CBIS), organizational information systems, and Information Systems management. (Replaced IM241 in Eberly College of Business core, effective fall, 1992)

**IM350 Business Systems Technology** 3c-0l-3sh
**Prerequisite:** CO220 or IM255
Student is taught fundamental and advanced concepts of computer hardware and a procedure for evaluation and acquisition of computer hardware.

**IM370 Advanced COBOL** 3c-0l-3sh
**Prerequisite:** CO220
**Corequisite:** IM350
Advanced COBOL is a continuation of introductory COBOL with an emphasis on structured methodology of program design, development, testing, implementation, and documentation of common business-oriented applications. It includes a heavy emphasis on the techniques and concepts of the table processing, file organization, and processing alternatives, internal and external sorting, subroutines, and application development for both the batch and on-line systems. Micro Focus COBOL software is utilized.

**IM372 Microcomputer Applications** 3c-0l-3sh
**Prerequisites:** IM350, CO220, AG201, or by permission
Demonstrates how to use the microcomputer in business and how to provide technical assistance to users of the microcomputer. Emphasis will be placed on integrating software and interfacing with mainframe computers or with minicomputers. Topics covered include microcomputer hardware, microcomputer operating systems, local area networks, and microcomputer software tools.

**IM382 Auditing for EDP Systems** 3c-0l-3sh
**Prerequisites:** AG201, CO220, or IM255
Emphasizes the responsibility of the systems analyst to include in systems design the proper management and financial controls and audit trails in business information systems. The design of controls for application programs and systems is covered. Audit software packages are examined.

**IM450 Data Base Theory and Application** 3c-0l-3sh
**Prerequisites:** IM370, upper-division students only
After learning data structures, the student will then apply them to CODASYL compatible data base management systems, TOTAL, and IBM's data base management system. Student must develop and use a data base as part of requirement. [Course revision in process]

**IM451 Systems Analysis** 3c-0l-3sh
**Prerequisites:** IM350 and IM255 or CO220
Develops an understanding of concepts and techniques involving conventional and structured approaches to analyzing problems of business information systems and systems definition feasibility, as well as quantitative and evaluative techniques of business information systems analysis.

**IM470 Systems Design** 3c-0l-3sh
**Prerequisite:** IM451
Students learn tools and techniques for design of a business system. Along with classroom discussions of principles and techniques for analyzing, designing, and constructing the system, students will formulate system teams to analyze the problems of an existing business information system, to design an improved system, and to control implementation of a new system.

**IM480 Distributed Business Information Systems** 3c-0l-3sh
**Prerequisite:** IM350
Study of the techniques involved in planning, design, and implementation of distributed processing systems. Distributed marketing, financial, and corporate accounting systems are included.

**IM481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**IM482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member. Approval is based on academic appropriateness and availability of resources.

**IM493 Internship in MIS** var-3-12sh
**Prerequisites:** IM370, consent of department chairperson and dean
Positions with participating business, industry, or governmental organizations provide the student with experience in systems analysis. Note: Internship IM493 can be taken, if the student qualifies, as a general elective. It does not fulfill the major-area elective requirement.

## IS International Studies
Department of Political Science
College of Humanities and Social Sciences

**IS281 Special Topics in Non-Western Studies** var-l-3sh
This course focuses on politics, society, and culture of a particular non-Western country or area. Course content is variable, depending on the semester. Will be taught by visiting exchange professors from non-Western countries. This Special Topics course may be offered on a continuing basis.

**IS482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## JN Journalism
Department of Journalism
College of Humanities and Social Sciences

**JN102 Basic Journalistic Skills** 3c-0l-3sh
**Prerequisite:** EN101
Required for journalism majors and minors. Emphasis on grammar, punctuation, spelling, AP Stylebook, copyediting, headlines, and accuracy. (Offered as JN106 prior to 1994-95)

**JN105 Journalism and the Mass Media** 3c-0l-3sh
**Prerequisite:** EN101
A critical examination of roles-goals of newspapers, magazines, radio, and television as they affect American society socially, politically, and economically.

**JN120 Journalistic Writing** 3c-0l-3sh
**Prerequisite:** EN101, nonmajors/minors
Emphasis on intelligent use of writing ability in a journalistic style and understanding of the why of journalism and mass media. This course practices and improves writing skills for all news media, print and broadcast.

**JN220 Writing for the Print Media** 3c-0l-3sh
**Prerequisites:** JN102 (C or better), majors only
A course in journalistic style intended for students who plan to become professional writers. Teaches the basic journalistic formats and strategies used in print media such as the summary lead, the delayed lead, and the conventional news-story format. Throughout emphasizes economy, clarity, and the development of voice for a given medium.

**JN243 History of the American Press** 3c-0l-3sh
**Prerequisites:** JN120 or 220
Traces the development of the American press from its colonial roots. Emphasis on the role of the press in political and social development. (Offered as JN343 prior to 1994-95)

**JN250 Women and the Press** 3c-0l-3sh
**Prerequisites:** EN101, sophomore standing
Explores the role of women in American journalism. Includes study of lives/careers of women journalists and their specific contributions to the profession. Emphasis on evolution of equal opportunity for women and other minorities in the American Press. Attention to the changing definition of news as influenced by the inclusion of women and minorities in editorial roles.

**JN281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**JN321 Feature Writing** 3c-0l-3sh
**Prerequisites:** JN102, 220
Designed for the student who might work in journalism or who might wish to write on a part-time or free-lance basis.

**JN323 Management in Mass Communications** 3c-0l-3sh
**Prerequisites:** JN493 or field experience
Attention given to the process of advancement to management positions in the advertising, journalism, and public relations industries.

**JN326 Public Relations I** 3c-0l-3sh
**Prerequisites:** JN102, 120 or 220
Introduces students to the principles, practices, programs, and possibilities in the various areas of public relations.

**JN327 Layout Design and Production** 2c-3l-3sh
**Prerequisite:** JN105
Provides basic techniques and theories of layout design and production, including typography, copyfitting, photo/art cropping and scaling, and steps in design process. Includes traditional paste-up and desktop publishing in the design of ads, newspapers, newsletters, brochures, and magazines.

**JN328 News Reporting** 3c-0l-3sh
**Prerequisites:** JN102, 105, 220, majors only
Includes instruction in writing the news story, preparing copy, interviewing, covering special events, and similar reporting activities.

**JN337 Editing** 3c-0l-3sh
**Prerequisites:** JN102, 220
Stresses basic practices such as copyediting and headline writing while also focusing on guidelines for improving accuracy, clarity, transition, spelling, and punctuation of copy. Students use wire service stylebook extensively.

**JN344 Issues and Problems** 3c-0l-3sh
**Prerequisites:** JN102, 120 or 220
Students examine critical case histories of ethical and professional situations and circumstances in the mass communication industry in a lecture and discussion format.

**JN345 Sports Journalism** 3c-0l-3sh
**Prerequisite:** JN220
Emphasizes skills for covering, writing, and editing of sports and introduces students to specific practices in newspaper, radio-TV, and sports information work.

**JN347 Journalism Law** 3c-0l-3sh
**Prerequisites:** JN328, junior/senior standing
Open to nonmajors by permission of the instructor. Survey of the major Supreme Court and state court rulings governing the mass media, especially the news media. Areas include libel, antitrust, free press/fair trial, privacy. Approach is nontechnical.

**JN348 The Editorial Page** 3c-0l-3sh
**Prerequisite:** Junior/senior standing
Emphasis on the writing of vigorous but thoughtful and fair editorials. Study of contemporary practice and policy on letters to the editor, columnists, cartoons, the op-ed page.

**JN375 World News Coverage** 3c-0l-3sh
**Prerequisite:** Sophomore standing
A course dealing with international news events and analysis of international new coverage in sources from around the world. Emphasis placed on analyzing comparative coverage of events in different sources. Students study not only current international news but also how it is reported. The goal of the course is fostering a critical attitude toward news.

**JN393 Document Design I** 3c-0l-3sh
**Prerequisite:** Junior/senior standing
Teaches students advanced principles of document design and gives them the opportunity to apply techniques of rhetorical/stylistic analysis, general problem solving, and holistic information display to a wide variety of writing formats used in business, industry, and government news.

**JN423 Management in Mass Communications** 3c-0l-3sh
**Prerequisites:** JN493 or field experience
Attention given to the process of advancement to management positions in the advertising, journalism, and public relations industries.

**JN427 Publications** 3c-0l-3sh
**Prerequisite:** JN327 or instructor permission
Provides advanced techniques and theories of publications design, including the legibility principles of typography, the psychological impact of color and paper, and designing on-line publications, such as newspapers, newsletters, and magazines. Students will also learn principles and concepts of publications management, including coping with deadline pressures and the creative disposition, and the marketing of publications. The class will produce a total publication. (pending Council of Trustees approval)

**JN430 Public Opinion and the News Media** 3c-0l-3sh
**Prerequisite:** Junior standing
Deals with understanding and measuring public opinion. Emphasis is placed on critically analyzing the historical origins and the dynamics of public opinion in the policymaking process as well as the role of the news media in public opinion. Students then measure people's thinking on any given issue or issues.

**JN446 Research Methods in Journalism** 3c-0l-3sh
**Prerequisite:** JN328 or instructor's permission
Will explore theoretical and practical issues in information gathering, with emphasis on data analysis and computer-assisted reporting for public affairs journalism. Students will apply scientific methods in news reporting and analyze the effects of precision journalism on society.
(Offered as JN346 prior to 1994-95)

**JN450 Advertising Writing** 3c-0l-3sh
Prerequisite: JN220, instructor permission
This is a basic course in the preparation of advertising copy and continuity for all media. It is a combination of lecture and laboratory course. Enrollment is limited to fifteen upperclass majors per semester. (Offered as JN350 prior to 1994-95)

**JN481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
These courses vary from semester to semester, covering a number of journalism specialties. From time to time they are converted to permanent course numbers. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**JN482 Independent Study** var-1-6sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Opportunities for independent study that goes beyond the usual classroom activities. Approval is based on academic appropriateness and availability of resources; enrollment is limited to fifteen upperclass majors per semester.

**JN490 Public Relations II** 3c-0l-3sh
**Prerequisite:** JN220, 326
A public relations writing class that includes assignments such as releases, features, newsletters, reports, biographies, rewrites, hometown stories, copyediting, interviewing, research, and special projects. (Offered as JN390 prior to 1994-95)

**JN491 Presentation Making** 3c-0l-3sh
**Prerequisite:** JN220, 326
Gives the student practice in writing and making oral presentations based on public relations cases and problems. Familiarizes the student with problem-solving and small-group communication skills necessary for those working in the area of public affairs. (Offered as JN391 prior to 1994-95)

**JN492 Problem-solving in PR** 3c-0l-3sh
**Prerequisite:** JN328
Introduces students to techniques for analyzing and tracking information flow in organizations. Introduces students to creative problem-solving techniques which are standard practice in corporate research groups.
(Offered as JN392 prior to 1994-95)

**JN493 Internship** var-6-12sh
**Prerequisites:** JN102, 105, 220, 328, department approval
On-the-job training opportunities in journalism and related areas. Maximum of 6sh may be applied to 30sh minimum of major.

**JN494 Document Design II** 3c-0l-3sh
**Prerequisites:** JN328, 393
Gives students advanced work in preparation of substantial corporate and government documents such as annual reports. lengthy project reports, and research reports, etc. Emphasizes skills in research of public and government documents, data analysis and problem solving, holistic information display, writing, and editing. (Offered as JN394 prior to 1994-95)

## LA

### Latin
Department of Spanish and Classical Languages
College of Humanities and Social Sciences

**LA101 Elementary Latin I** 4c-0l-4sh
For beginning students. Emphasis is on oral and reading skills. Students will learn most of the Latin noun system; they will also learn how to answer simple and moderately difficult Latin questions. There are also short readings in easy Latin. Students learn significant differences between Latin and English. Attendance is required.

**LA102 Elementary Latin II** 4c-0l-4sh
A continuation of Latin 101. In grammar, students finish the noun system and learn several Latin tenses, including the perfect tense. Latin questions, oral and written, remain an important part of the course, as do the readings. There are class discussions and a paper on readings in English from Sophocles, Tacitus, and Cicero. Attendance is required.

**LA201 Intermediate Latin** 4c-0l-4sh
More of the verb system is learned; while grammatical studies continue. more emphasis is placed on learning how to read short, intermediate-level selections from Latin literature. Oral and written questions continue. Ovid's Metamorphoses is the topic for class discussion and a paper. Liberal Studies credit is given.

**LA281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**LA351 Advanced Latin I** 3c-0l-3sh
Reviews grammar in-depth; analyzes the structure of the language. Written themes are not required. Selections from Latin prose are read for knowledge of their content and for developing knowledge of the structure of the language. Offered only by individualized instruction.

**LA352 Advanced Latin II** 3c-0l-3sh
Continuation of Latin 351. Selections are from poetry this semester.

**LA361 Development of Roman Culture and Literature** 3c-0l-3sh
Latin poetry and history will be read to show the influence of political and social ideas on literature; emphasis will be on the contrast between the Republican and Imperial periods. Some reading will be in Latin; most will be in English. Offered only by individualized instruction.

**LA362 Latin Conversation and Composition** 3c-0l-3sh
Aims at the ability to speak Latin on a conversational level and to write grammatically correct Latin prose. Offered only by individualized instruction.

**LA371 Survey of Latin Literature I** 3c-0l-3sh
Comprehensive view of Latin literature from Ennius through the Augustan Age. Offered only by individualized instruction.

**LA481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**LA482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
An opportunity to engage in an in-depth analysis of some topic dealing with the Latin language and culture through consultation with a faculty member. Approval is based on academic appropriateness and availability of resources.

## LB

### Library
The University Libraries
Academic Affairs Division

**LB151 Introduction to Library Resources** var-1sh
A lecture/laboratory course (fourteen one-hour classes) which provides an introduction to the resources of a university library, how those resources are organized, and how to use those resources effectively.

**LB201 Internet and Multimedia** 3c-0l-3sh
**Prerequisite:** BE/CM/CO/IM 101 or prior exposure to word processing and electronic mail
The major focus will be on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. This information literacy course is designed for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students will learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BE/CM/CO/IM/LB 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.)

**LB281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**LB481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

## LC

### Learning Center
The Learning Center
Student Affairs Division

**LC 070 Reading Skills for College Study** 3c-0l-3sh
This course is designed to assist students in the development of college-level reading skills with emphasis on textbook reading. Includes literal and critical comprehension skills, vocabulary development, and reading efficiency. This course carries institutional, nondegree credit, and attendance is required.

**LC 075 Reading and Study Skills Applications** 1c-0l-1sh
**Prerequisite:** LC permission
Assists students in the applications of college-level reading and study skills to content-area coursework. Intended for freshman students in poor academic standing who need additional and individualized guidance in the transfer of learning strategies into day-to-day reading and coursework. Students will participate in small-group instruction, as well as individual appointments with the instructor. This course carries institutional. noudegree credit. and attendance is required.

**LC 090 Introduction to College Math I** 3c-01-3sh
**Prerequisite:** A student may not register for this course after successfully completing any course offered by the mathematics department without the written approval of the Learning Center director
Reviews basic computational skills and their applications. Includes operations with whole numbers, decimals, and fractions: the concepts of ratios. proportions, and percents; basic geometric principles; and an introduction to algebra. This course carries institutional, nondegree credit. and attendance is required.

**LC 095 Introduction to College Math II** 3c-01-3sh
**Prerequisite:** A student may not register for this course after successfully completing any course offered by the mathematics department, without written approval of the Learning Center director
Introduces beginning algebraic concepts, including signed numbers; rules and properties of equations; exponents; polynomials; factoring; algebraic fractions; graphs and linear equations, inequalities, and radical expressions. This course carries institutional, nondegree credit, and attendance is required.

**LC150 Educational Planning** 1c-0l-1sh
Introduces students to the system of higher education and to skills that promote effective educational planning and decision making. Includes the topics of history and purposes of higher education and its changing curricula; models for, and variables to consider in, decision making, goal setting, and educational planning. **Note:** Certain sections of this course will be restricted to specific enrollment groups. (Offered as ED150 prior to 1997-98)

**LC160 Learning Strategies** 1c-0l-1sh
Assists students to develop and use effective and efficient study strategies on a consistent basis. Students will examine their academic goals and implement study strategies to help achieve those goals. Includes the topics of goal setting and self-mnnitoring, learning styles, test preparation and test taking, lecture and textbook note taking, time management and concentration, and general strategies for learning. Students will be required to give evidence of application of the study strategies to other courses in which they are currently enrolled. Active participation in class meetings is expected. **Note:** Certain sections of this course will be restricted to specific enrollment groups. (Offered as ED160 prior to 1997-98)

**LC170 Career Exploration** 1c-0l-1sh
Introduces students to the theoretical and practical framework with which to explore careers compatible with overall academic skills, aptitudes, and life goals. Students will examine the world of work, assess their interests and abilities, and make realistic decisions on academic majors and careers. **Note:** Certain sections of this course will be restricted to specific enrollment groups. (Offered as ED170 prior to 1997-98)

## Industrial and Labor Relations
Department of Industrial and Labor Relations
College of Health and Human Services

**LR281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered un an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**LR426 Case Studies in Labor-Management Relations** 3c-0l-3sh
In-depth study of daily labor-management relationships in a variety of organizational settings through utilization of case study technique. Focuses on a problem-solving approach to the legal and contract administration components of the labor-management relationship.

**LR480 Principles and Practices of Collective Bargaining** 3c-0l-3sh
An examination of the historical, legal, and functional parameters of collective bargaining. Topics covered include the organizing process, negotiations. contract administration, dispute resolution, and public sector labor relations.

**LR481 Special Topics in Industrial and Labor Relations** var-l-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**LR482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**LR499 Independent Study** var-1-3sh
Independent reading and research under the direction of a faculty member.

## Liberal Studies
Liberal Studies Program
Academic Affairs Division

**LS499 Senior Synthesis** 3c-0l-3sh
**Prerequisite:** 73 or more semester hours earned
This course helps students understand and handle complex intellectual and social issues from multiple perspectives. A selection of topics, available each semester and summer session, is announced and described in the undergraduate course schedule. Students should schedule the course during the senior year or at least no earlier than the last half of the junior year. In order to broaden their experiences, students are encouraged to enroll in synthesis sections taught by instructors outside of the students' major fields.

## Mathematics
Department of Mathematics
College of Natural Sciences and Mathematics

**MA100 Intermediate Algebra** 3c-0l-3sh
**Note:** A student may not take MA100 after successfully completing MA110 or a calculus course without the written approval of the mathematics department chairperson
A basic course in algebra including factoring, exponents and radicals, systems of linear equations, complex fractions, and inequalities. Designed for those students who lack the basic algebraic skills required in MA110 Elementary Functions. This course will not meet Liberal Studies math requirements. (Title was Basic Algebra prior to 1995-96.)

**MA101 Foundations of Mathematics** 3c-0l-3sh
Introduces logic and mathematical way of analyzing problems; develops an appreciation for nature, breadth, and power of mathematics and its role in a technological society; and introduces useful mathematics or mathematics related to student interest. Possible topics include logic, problem solving, number theory, linear programming, probability, statistics, intuitive calculus, introduction to computers, mathematics of finance, game theory.

**MA110 Elementary Functions** 3c-0l-3sh
**Note:** A student may not take MA110 after successfully completing a calculus course without the written approval of the mathematics department chairperson. For students not prepared to begin the study of calculus; topics include polynomial, exponential, logarithmic, and trigonometric functions.

**MA117 Principles of Mathematics** 3c-01-3sh
This course is an introduction to the nature of mathematics, designed specifically as a first course for mathematics education majors to experience several facets of mathematics including deduction, induction, problem solving, discrete mathematics, and theory of equations. Enrollment open to secondary mathematics education majors only.

**MA121 Calculus I for Business, Natural, and Social Sciences** 4c-0l-4sh
**Note:** A student may not take MA121 after successfully completing another calculus course without the written permission of the mathematics department chairperson.
**Prerequisite:** MA110 or equivalent high school preparation
Introduces non-Math major to analytic geometry, elementary functions (including logarithmic and exponential functions), central ideas of the calculus (limit, derivative, and integral), applications of derivatives to business, social, and natural sciences.

**MA122 Calculus II for Business, Natural, and Social Sciences** 4c-0l-4sh
Applications of integrals to business, natural, and social sciences, functions of several variables, trigonometric functions, sequences and series, numerical methods, differential equations.

**MA123 Calculus I for Physics and Chemistry** 4c-0l-4sh
**Prerequisites:** High school algebra, geometry, and trigonometry
Functions, limits, continuity, derivatives, application of the derivative, integral, and applications of the integral. (Trigonometric and inverse trigonometric functions are included throughout the course.)

**MA124 Calculus II for Physics and Chemistry** 4c-0l-4sh
Logarithmic and exponential functions, techniques of integration, sequences and series, differential calculus of functions of several variables, multiple integrals, line integrals, surface integrals, differential equations with application to physical problems.

**MA127 Calculus I** 4c-0l-4sh
**Prerequisite:** Permission of the mathematics department
The first in a three-course series of courses which stresses the theory of the calculus as well as the application in problem solving. Topics to be included are real numbers, an introduction to analytic geometry, functions, limits and continuity, derivatives and applications, the differential and antidifferentiation.

**MA128 Calculus II** 4c-0l-4sh
**Prerequisite:** Permission of the mathematics department
The second in a three-course series of courses stresses the theory of calculus as well as the application in problem solving. Topics to be included are definite integrals and applications, logarithmic and exponential functions, trigonometric and inverse trigonometric functions, polar coordinates, hyperbolic functions, indeterminate forms, improper integrals, and Taylor's formula.

**MA151 Elements of Mathematics I** 3c-0l-3sh
Topics included are sets, concepts of logic, mathematical systems, systems of numeration, developing the set of integers, rational numbers, and real numbers.

**MA152 Elements of Mathematics II** 3c-0l-3sh
**Prerequisite:** MA151
Topics included are sentences in one variable, sentences in two variables, nonmetric geometry, metric geometry, coordinate geometry, introduction to statistics and probability, computers, and calculators.

**MA171 Introduction to Linear Algebra** 3c-0l-3sh
Introduction to vector spaces, linear transformations, determinants, and matrix algebra. Topics are presented in a direct and intuitive approach.

**MA214 Probability and Statistics for Business Majors** 3c-0l-3sh
Designed to introduce the study of probability theory, discrete random variables and probability distributions, empirical frequency distributions, theoretical frequency distributions, statistical investigations and sampling, and sampling distributions.

**MA216 Probability and Statistics for Natural Sciences** 4c-0l-4sh
**Prerequisite:** MA121
Frequency distributions, measures of central tendency and variation, probability, probability distributions, sampling distributions. Hypothesis testing for means, variances, proportions. Correlation and prediction, regression, analysis of variance, and nonparametric statistics. Emphasis on applications.

**MA217 Probability and Statistics** 3c-0l-3sh
(For non-Math majors) Frequency distributions, measures of central tendency, variation, elementary probability, sampling, estimation, testing hypotheses, correlation, and regression; emphasis on applications as opposed to theoretical development of topics.

**MA219 Discrete Mathematics** 3c-0l-3sh
**Prerequisites:** CO110, and MA123, 127, or 122
Topics include set algebra, mappings, relations, semigroups, groups, directed and undirected graphs, Boolean algebra, and propositional logic, with examples and applications of these to various areas of computer science. Emphasis placed on developing an intuitive understanding of basic structures rather than formal theories and influence of these topics on theory and practice of computing.

**MA227 Calculus III** 4c-0l-4sh
**Prerequisite:** Permission of the mathematics department
The third in a three-course series of courses which stresses the theory of calculus as well as the application in problem solving. Topics to be included are vectors in the plane, parametric equations, vectors in three-dimensional space, solid analytic geometry, differential calculus of functions of several variables, directional derivatives, gradients, applications of partial derivatives, and infinite series.

**MA241 Differential Equations** 3c-0l-3sh
**Prerequisites:** MA122, 124, or 227
Emphasis is placed on techniques of solution and elementary physical applications. A thorough study is made of differential equations classified as order one-degree one, linear, and nonhomogeneous. Solution techniques involving reduction of order techniques, the differential operator, and infinite series are introduced.

**MA271 Introduction to Algebraic Structures** 3c-0l-3sh
**Prerequisite:** MA171
Gives student basic ideas of contemporary mathematics. Includes mathematical logic, algebra of sets, equivalence relations and partitions of sets, functions, and fundamentals of group theory. Methods of proof in area of abstract mathematics.

**MA281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**MA317 Introduction to Probability and Statistics** 3c-0l-3sh
**Prerequisites:** MA152, Elementary Education concentration
Introduces students to elementary concepts of probability and statistics which will enable them to analyze data, make predictions, and determine which concepts may be used with children.

**MA320 Mathematics for Early Childhood** 3c-0l-3sh
**Prerequisites:** MA151, Early Childhood major
This course studies child-centered, activity-oriented mathematics programs for early childhood education. The course focuses on helping children develop understanding and insight into basic concepts of mathematics through the use of manipulative materials. Topics include pre-number activities, number activities, numeration, operations on whole numbers, estimation, rational numbers, geometry, measurement, probability, statistics, and problem solving. (Offered as MA450 prior to 1994)

**MA342 Advanced Mathematics for Applications** 4c-0l-4sh
**Prerequisite:** MA241
Deals with the application of mathematics to problems of science. Emphasis is placed on the three phases of such an application and on the development of skills necessary to carry out each step: (a) translation of the given physical information to a mathematical model; (b) treatment of the model by mathematical methods; (c) interpretation of the mathematical result in physical terms. Topics included are vector calculus, integral theorems, Fourier series, partial differential equations, and the Laplace transformation.

**MA350 History of Mathematics** 2c-0l-2sh
**Prerequisite:** Completion of a calculus sequence or permission of the instructor
The history of mathematics is concerned with the origins, philosophy, and development of the mathematical sciences.

**MA353 Theory of Numbers** 3c-0l-3sh
**Prerequisite:** MA271 with a C or better grade
Divisibility, congruences, primitive roots, number theoretic functions, diophantine equations, continued fractions, quadratic residues.

**MA355 Foundations of Geometry I** 3c-0l-3sh
**Prerequisites:** MA171, 271 with a C or better grade
Studies various groups of transformations and geometries associated with these groups in the Euclidean plane. The Euclidean Similarity and affine and projective groups of transformations are studied.

**MA363 Mathematical Statistics I** 3c-0l-3sh
**Prerequisites:** MA122, 124, or 227
Probability theory necessary for an understanding of mathematical statistics is developed. Applications of set theory to models, combinations and permutations, binomial, Poisson and normal distributions, expected values, and moment generating functions.

**MA364 Mathematical Statistics II** 3c-0l-3sh
**Prerequisite:** MA363
Multivariate distributions, change of variable technique, chi-square distribution, estimation, confidence intervals, hypothesis testing, contingency tables, goodness of fit. Practical applications are used to aid in the development.

**MA366 Preparation for Actuarial Examinations** 1c-0l-1sh
**Prerequisites:** MA171 and calculus sequence
This course provides an introduction to the actuarial profession and helps the student prepare for the first actuarial examinations. The examination preparation consists of studying sample actuarial examinations and related material. The student is required to take the actuarial examination. The student should be aware that for most students, considerable study beyond the requirements of this one-credit course will be required in order to pass the actuarial examinations.

**MA371 Linear Algebra** 3c-0l-3sh
**Prerequisites:** MA171, 271 with a C or better grade
Vector spaces and linear transformations are studied in a theoretical setting. Also, canonical forms and multilinear algebra are studied.

**MA417 Statistical Applications** 3c-0l-3sh
**Prerequisites:** MA214, 216, or 217 (for non-Math majors)
Using computer programs, a wide array of statistical procedures for educational research workers will be explored. Basic concepts of statistical inference and prediction will be reviewed, including regression analysis and prediction, hypothesis testing, analysis of variance and covariance, and partial and multiple correlation. Emphasis is on use of the computer and interpretation of computer printouts, along with understanding techniques employed. No computer knowledge is necessary.

**MA418 Sampling Survey Theory and Its Application** 3c-0l-3sh
**Prerequisites:** (For non-Math majors) MA214, 216, or 217
Directed to the student who is or will be doing quantitative research, commissioning large-scale surveys, and evaluating the results. Sampling techniques and statistical principles underlying their use will be introduced. Consideration to the practical problems associated with implementation.

**MA420 Pre-Calculus Mathematics I** 3c-0l-3sh
**Prerequisites:** MA152; Elementary Education concentration
Examines the function concept as applied to elementary real number functions and graphing techniques for these functions. Topics include real number functions such as absolute value, step, linear, quadratic, and other polynomial functions, trigonometric and other periodic functions, exponential logarithmic functions, and all other inverse functions. Students will examine curricular materials that develop function concepts in Grades K-8.

**MA421 Advanced Calculus I** 3c-0l-3sh
**Prerequisites:** MA124 or 227, MA271 with a C or better grade
Study of set theory, real number system, functions topology of Cartesian space, sequences, convergence and uniform convergence, continuity, and uniform continuity.

**MA422 Advanced Calculus II** 3c-0l-3sh
**Prerequisite:** MA421
Includes the study of convergence sequences in Rn, global properties of continuity, uniform continuity, differentiation of Rn, Riemann integrals, and infinite series.

**MA423-424 Complex Variable I and II** each 3c-0l-3sh
**Prerequisite:** MA124 or 227
Introduction to the theory of functions of a complex variable: topics included are elementary functions, analytic functions, conformal mapping, integration, series, and application.

**MA425 Applied Mathematical Analysis I** 3c-0l-3sh
**Prerequisites:** Calculus sequence, introductory linear algebra, or permission of instructor
This course provides the necessary background for an understanding of mathematical programming, proofs of convergence of algorithms, convexity, and factorable functions. It also develops necessary concepts in matrix theory which are required to develop efficient algorithms to solve linear and nonlinear programming models.

**MA427 Introduction to Topology** 3c-0l-3sh
**Prerequisite:** MA271 with a C or better grade
Study of sets, functions, continuity, compactness, the separation axioms, and metric spaces: application of topology to analysis is demonstrated.

**MA445 Programming Models in Operations Research** 3c-0l-3sh
**Prerequisites:** Two-semester sequence of calculus and MA171 or permission of instructor
Development of deterministic mathematical models for managerial and social sciences with relevant computational techniques.

**MA446 Probabilistic Models in Operations Research** 3c-0l-3sh
**Prerequisites:** Two-semester sequence of calculus, MA363
Development of probabilistic mathematical models for managerial and social sciences with relevant computational techniques.

**MA447 Simulation Models** 3c-0l-3sh
**Prerequisites:** Completion of the calculus sequence: background in statistics and probability, and familiarity with concepts of programming (knowledge of a particular programming language not required)
This course considers the types of models that are basic to any simulation and methods for building and using such models. It includes discrete and continuous system simulations, their applications, and an introduction to SLAM II (Simulation Language for Alternative Modeling).

**MA451 Numerical Methods for Supercomputers** 3c-0l-3sh
**Prerequisites:** MA121 and 122, or MA123 or 127, MA171, CO250
Super computers make use of special computer architectures—vector and parallel processors—in order to achieve the fastest processing speed currently available. Students will be introduced to these features and will learn how numerical algorithms can be constructed to exploit supercomputers' capabilities. Students will gain practical experience in programming for the Cray, YMP, in incorporating existing scientific software packages into user-written programs, in submitting remote jobs to the Pittsburgh Supercomputer Center, and in producing animated graphical output to summarize the typically large volume of output data generated by large scientific programs. (Also offered as CO451; may not register for duplicate credit)

**MA452 Seminar in Teaching Algebra** var-1-4sh
**MA453 Seminar in Teaching Geometry** var-1-4sh
**MA454 Seminar in Teaching General Mathematics** var-1-4sh
Seminars are designed for pre-student teacher. Students in each class will gain insights into the problems in teaching each topic and become aware of the materials available and methods of instruction geared to the special type of student. Education majors only.

**MA456 Principles of Geometry I** 3c-0l-3sh
**Prerequisites:** MA152, Elementary Education concentration
Students become acquainted with an informal, intuitive approach to geometry. Activities and materials for teaching geometrical concepts to children are an integral part of the course.

**MA457 Introduction to Number Theory** 3c-0l-3sh
**Prerequisites:** MA152, Elementary Education concentration
Introduction to topics of elementary number theory including divisibility, prime numbers, factorization, modular arithmetic, problem solving, and place of number theory in the elementary school curriculum. Students will examine many number theory activities which can help to strengthen skills with basic facts in an interesting, nonroutine setting.

**MA458 Introduction to Logic and Logical Games** 3c-0l-3sh
**Prerequisites:** MA152, Elementary Education concentration
Introduction to some of the basic ideas, terminology, and notation of mathematical logic and Boolean algebra as well as games of strategy that involve logic. In addition, an investigation of how logic is taught and used in various programs for the elementary school.

**MA459 Computer-related Topics in the Elementary and Middle School** 3c-0l-3sh
**Prerequisites:** MA152, Elementary Education concentration
Provides teachers with concepts and techniques necessary to teach computer-related topics to children. Participants will work with elementary school children throughout the semester.

**MA460 Computers and Calculators in Secondary School Mathematics Instruction** 3c-0l-3sh
**Prerequisite:** CO205
Students will explore how computers and calculators can be used as tools to enhance the instruction in secondary school mathematics.

**MA465 Topics in Statistics** 3c-0l-3sh
**Prerequisite:** MA364
Correlation and regression from applied and theoretical points of view; bivariate and multivariate normal distribution, analysis of variance, nonparametric methods. Practical problems involving statistical techniques and use of computer statistical packages. Knowledge of computer programming is not required.

**MA471 Basic Concepts of Algebra** 3c-0l-3sh
**Prerequisites:** MA152, Elementary Education concentration
Concepts of basic algebraic structures such as group, ring, integral domain, field, and vector space are studied within the context of the mathematical maturity of the student. Other topics include relations and functions, polynomials and polynomial equations, systems of equations, and inequalities. Consideration given to development of these concepts in the mathematics curriculum.

**MA476 Abstract Algebra I** 3c-0l-3sh
**Prerequisites:** MA171, 271 with a C or better grade
Development of theory of integral domains, fields, rings, and groups; designed to develop student's power to think for himself or herself and to improve ability to construct formal proofs.

**MA477 Abstract Algebra II** 3c-0l-3sh
**Prerequisite:** MA476
Designed to have student continue study of algebra by use of axiomatic method; Euclidean domains; polynomial domains and extension fields included; interrelationships between these structures and simpler structures, particularly groups and rings, are developed as in study of Galois group of a polynomial and in an introduction to Galois theory.

**MA481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**MA482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**MA490 Independent Study** var-1-3sh

**MA493 Internship in Mathematics** var-3-12sh
Prerequisites: Completion of core curriculum, completion of application
Positions with participating companies or agencies provide students with experience in mathematics-related work under the supervision of the agencies and faculty. Requirements include one to three on-site consultations, two university consultations, completion of progress reports, and presentation of final cumulative paper. Internship credit may not be used in fulfilling math major course requirements.

## MG Management
Department of Management
Eberly College of Business

**Note:** All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

**MG275 Introduction to Entrepreneurship** 3c-0l-3sh
**Prerequisites:** AG201, EC121, sophomore status, only for nonmajors, permission by department
Entrepreneurship is defined, common myths are discussed, and characteristics of entrepreneurs are identified. Basic characteristics of entrepreneurs are reviewed. This course includes topics such as the psychology of entrepreneurship; economic and social aspects of entrepreneurship; history; techniques of purchasing a company; new venture initiation; and risk taking.

**MG281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**MG300 Human Resource Management** 3c-0l-3sh
**Prerequisite:** PC101
Designed to recognize and evaluate the application of behavioral science approaches in the study of human resource management. Topics include recruiting and selection, training, management development, performance evaluation, communications, wage and benefit programs, and management-labor relations.

**MG305 Organizational Staffing** 3c-0l-3sh
**Prerequisites:** MG300, MA214
Focuses on the theoretical, technical, administrative, and legal issues involved in the recruitment, selection, placement, and promotion of individuals by organizations. Topics covered include human resource planning, job analysis, job description and specifications, recruitment, selection process, equal employment opportunity and affirmative action, reliability and validity of selection instruments and techniques, and contemporary issues in selection.

**MG310 Principles of Management** 3c-0l-3sh
Provides the student with an in-depth identification and understanding of the relevant theories, concepts, and principles underlying the management function.

**MG311 Human Behavior in Organizations** 3c-0l-3sh
**Prerequisite:** PC101
Human problems of management. Basic ideas and theories from the behavioral sciences as they apply to human behavior in organizations are presented. Management solutions to problems resulting from individual-organization interaction are emphasized.

**MG325 Small Business Management** 3c-0l-3sh
**Prerequisites:** MG275, MG310, MK320
A survey course emphasizing those aspects of small business management not covered elsewhere in the student's program. Key topics include Real Estate, Site Selection, and Facilities Management; Purchasing Management, Vendor Relations, and Inventory Systems: Plant Security, Loss Control, Risk and Insurance Management; Human Resources Management, Employee Benefits, Motivation, and Leadership; Small Business Market Research, Customer Services Management, and Pricing. A review of other elements of the small firm's milieu is included as a necessary contextual element (e.g., planning, accounting, financing, law).

**MG330 Production and Operations Management** 3c-0l-3sh
**Prerequisites:** MA121, 214, junior status, Eberly College of Business or approved major
Study of the process of converting an organization's inputs into outputs whether in goods-producing or service industries. Provides an overview of concepts, tools, and techniques used in management of production and operations function in organizations.

**MG334 Quality Management** 3c-0l-3sh
**Prerequisite:** MG330
Emphasizes the philosophy that quality is an organizationwide phenomenon that influences every aspect of its operations. An overview of current quality management philosophies and tools and techniques for managing quality in manufacturing and services.

**MG350 International Business** 3c-0l-3sh
**Prerequisite:** MG310
A study of the international dimensions of business and the critical environmental and organizational factors that affect managerial approaches in the international arena. Focuses upon the management problems stemming from the movement of goods, human resources, technology, finance, or ownership across international boundaries. (Also offered as MK350)

**MG351 International Management** 3c-0l-3sh
**Prerequisite:** MG310
Provides the student with a general foundation on managing multinational corporations (MNCs). Examines the macro- and structural-level issues of MNCs. Focuses on planning, organization structure, managerial decision making, and human resource management in global structures and differences between MNCs and domestic organizations.

**MG400 Compensation Management** 3c-0l-3sh
**Prerequisite:** MG300
Studies the policies and programs that help managers design and administer compensation systems for private and public sector enterprises. Includes motivation theories and practice designing of compensation systems. (Title was Wage and Salary Administration prior to 1994-95.)

**MG401 Management Development and Training** 3c-0l-3sh
**Prerequisites:** MG300, 310
Principles, problems, and procedures in planning, organizing, directing, and controlling all aspects of training and development programs in a business enterprise. Methods of improving and development of managerial skills are emphasized.

**MG402 Seminar in Human Resource Management** 3c-0l-3sh
**Prerequisites:** MG300, graduating senior
An integrative course in Human Resource Management. Considers current issues in human resource management literature and contemporary topics in the human resource management field using case studies.

**MG403 Small Business Planning** 3c-0l-3sh
**Prerequisites:** MG325, AG300, BE/CO/IM101
Integrates the content of much of the business core and relates it to the business planning for small businesses and entrepreneurial efforts. The student will be introduced to the concepts which will support the development of an effective business plan.

**MG406 Human Resources Management Research** 3c-0l-3sh
**Prerequisites:** QB215, MG300
Study of the nature of research questions, research methods, research design, collection, analysis, and interpretation of data. Focuses on design, development, implementation, and evaluation of Human Resources Management programs. Applications in employee selection, performance measurement, work attitudes and motivation, employee training, and development areas.

**MG428 Seminar in Management** 3c-0l-3sh
**Prerequisites:** MG310
An integrative course in management. Considers current literature in the field and contemporary issues in management using case studies.

**MG432 Business and Society** 3c-0l-3sh
Overview of the interactions between business and the larger social system in which it operates. Considers the problem, solutions, and future directions of societal issues and their relationships to the business environment. Topics discussed include consumerism, the morality of advertising, self-regulation, pollution and ecology, overpopulation, government regulation, and the social and ethical responsibilities of business and industry. (Also offered as MK432; may not be taken for duplicate credit)

**MG437 Operations Management System** 3c-0l-3sh
**Prerequisite:** MG330
Theoretical and practical understanding of manufacturing and service planning and control, including systems modeling, purchasing and sourcing, information and control including MPS, MRP, and MRP-II, scheduling, etc. Manufacturing and service technologies and trends are also emphasized. Computer applications are used for understanding the interrelationships between various components of operations system.

**MG452 Comparative Management** 3c-0l-3sh
**Prerequisite:** MG350
Study of the similarities and differences among managers, management practices, and organizations in different cultures. A variety of comparative management systems, models, and theories are presented, and research findings are examined.

**MG454 International Competitiveness** 3c-31-3sh
**Prerequisite:** MG350
Study of the most important challenges that face nations and firms alike in gaining or restoring competitiveness. Focuses on factors that determine the success of nations and their firms in highly dynamic world markets. Various theories, models, and cases dealing with competitive advantage are examined.

**MG459 Seminar in International Management** 3c-0l-3sh
**Prerequisites:** MG454, senior standing
Analysis of recent literature and developments related to global business issues such as strategic alliances, human resource management in global environments, global assignments, Japanese business system, multinational corporations in the world economy.

**MG481 Special Topics in Management** var-1-3sh
Covers advanced, innovative, or exploratory topics and disciplines within management. Specific content items developed by instructor. Credits may be applied to either required (by permission of department chairperson) or free electives in a student's program.

**MG482 Independent Study** var-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member. Approval is based on academic appropriateness and availability of resources.

**MG492 Small Business/Entrepreneurship Internship** var-3-12sh
**Prerequisites:** MG403, permission of department chairperson, 2.75 overall QPA, all other requirements of the Eberly College of Business
This course involves practical entrepreneurial experience of on-site consulting with small business firms. Students will generally work for a semester on functionally related topics in accounting, finance, marketing, and MIS or on general topics such as business planning, forecasting, policy, and general management.

**MG493 Management Internship** var-3-12sh
Practical experience to develop knowledge and skills in the application of theory to actual problems in a nonclassroom setting. A maximum of 3sh of internship in the student's major may be applied toward the management and human resource management major area elective requirements. Additional internship credit must be used as free electives only. Admission only by permission of the department chairperson and dean, Eberly College of Business.

**MG495 Business Policy** 3c-0l-3sh
**Prerequisites:** Completion of all Business Core requirements or permission; graduating seniors
A capstone case analysis course designed to give the student practice in applying business theories to the solution of management problems. An analysis of how top management determines strategy and policy and influences the philosophy and character of the company. To develop in the student a general management viewpoint that integrates the various functions of the organization.

## Music History
Department of Music
College of Fine Arts

**MH101 Introduction to Music** 3c-0l-3sh
Course presumes no technical background but does utilize the varied musical experiences of each individual to help extend interest as far as possible. Attendance at various concerts of university organizations, cultural life events, and visiting artist concerts is required to augment listening experiences of students. Offered as MU101 prior to Summer, 1989.

**MH103 Perspectives in Jazz** 3c-0l-3sh
Designed to give an overview of the development and contributions of jazz in the American culture and provide a background for a more intensive and detailed study of jazz for the Jazz Studies major. Offered as MU103 prior to Fall, 1989.

**MH281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**MH301 Music History I** 3c-0l-3sh
**Prerequisites:** EN101, EN202, HI195, HI305
Intensive study of the history and style of Medieval, Renaissance, and Baroque music. Considerable analytical listening required.

**MH302 Music History II** 3c-0l-3sh
**Prerequisites:** MH301 or permission
Intensive study of the history and styles of Classical, Romantic, and twentieth-century music to 1950. Considerable analytical listening required.

**MH322 Medieval and Renaissance Music** 3c-0l-3sh
Intensive study of the plainchant foundations in the early Middle Ages; the origins of polyphony; sacred and secular music of the thirteenth to the sixteenth centuries; special emphasis on Dufay, Josquin, Palestrina, and their contemporaries. (Offered as MU322 prior to Fall, 1989. Title prior to Fall, 1992, was Renaissance Music.)

**MH323 The Baroque Era** 3c-0l-3sh
**Prerequisites:** MH301, 302
Extends from Monteverdi through Bach and Handel and considers vocal and instrumental forms, styles, and practices of era.

**MH324 The Classical Era** 3c-0l-3sh
**Prerequisites:** MH301, 302
A survey of music from about 1725 to about 1827, with special attention to the music of Mozart and Haydn. Consideration is given also to the works of D. Scarlatti and C.P.E. Bach. (Titled as Eighteenth Century Music prior to Fall, 1992)

**MH325 The Romantic Era** 3c-0l-3sh
A survey of music from about 1800 to 1910, with attention directed to the earlier romantic composers such as Beethoven, Schubert, Mendelssohn, and Berlioz through the later romantic composers such as Wagner, Tschaikowsky, Mahler, and Dvorak as well as others. (Titled as The Early Romantic Period prior to Fall, 1992)

**MH420 The Twentieth Century** 3c-0l-3sh
**Prerequisites:** MH301, 302
A survey of the stylistic trends of music from 1900 to the present, beginning with Debussy, Ravel, and other impressionists through the music of Schonberg, Stravinsky, Webern, Honegger, and Milhaud. Offered infrequently. (Titled as Contemporary Music prior to Fall, 1992.)

**MH421 American Music** 3c-0l-3sh
**Prerequisites:** MH301, 302
A study of history and literature of music in America from 1600 to the present day. Offered as MU421 prior to Fall, 1989.

**MH481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**MH482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## MI Marine Science
Marine Science Consortium/Biology Department
College of Natural Sciences and Mathematics

**MI110 Introduction to Oceanography** var-3sh
Introduction to physical, chemical, biological, and geological aspects of oceans and methods and techniques of oceanography. Lab emphasis placed on at-sea assignments.

**MI211 Field Methods in Oceanography** var-3sh
**Prerequisite:** MI110 or consent of instructor
Familiarization with dynamic marine environment involving use and application of oceanographic instruments and sampling devices.

**MI212 Navigation** var-3sh
**Prerequisite:** Four years' high school math or equivalent or consent of the instructor
Covers navigation, i.e., the art and science of safely bringing a vessel from one position to another in a body of water. Course divided into (1) brief historical background; (2) navigation within sight of land, i.e., piloting; (3) navigation in the open sea, including electronic navigation methods.

**MI221 Marine Invertebrate Zoology** var-3sh
**Prerequisite:** One year of biology or consent of instructor
Study of marine invertebrates with emphasis on development, reproduction, structure, function, and classification of selected marine organisms.

**MI241 Marine Biology** var-3sh
**Prerequisites:** Botany and zoology or consent of instructor
Study of plant and animal life in marine environment with emphasis placed upon physical and chemical factors affecting biota.

**MI250 Management of Wetland Wildlife** var-3sh
The ecology and management of wetland wildlife, particularly of freshwater marshes and saltwater marshes. Special emphasis on ecosystem approach.

**MI260 Marine Ecology** var-3sh
**Prerequisite:** One year of biology or consent of instructor
A course in ecology of marine organisms.

**MI270 Scuba Diving** var-3sh
**Prerequisites:** Swimming ability and good health. (A standard diving physical form will be mailed to students electing the course.)
Students who complete course will receive a National Association of Underwater Instructors Diver Certificate.

**MI280 Marine Field Biology** var-3sh
**Prerequisites:** None
An introduction to basic principles of ecology and natural history of selected plants and animals in terrestrial, freshwater, and marine environments. Suitable for non-Science majors.

**MI281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**MI331 Chemical Oceanography** var-3sh
**Prerequisites:** MI110 and one year of chemistry
Treatment of oceanic chemical phenomena by sampling and laboratory analysis techniques.

**MI342 Marine Botany** var-3sh
In-the-field studies and laboratory analysis by instrumentation of marine and marine fringe plants in the Middle Atlantic Coast as exemplified by those found in the Cape Henlopen, Delaware, and Wallops Island, Virginia, areas.

**MI343 Marine Ichthyology** var-3sh
**Prerequisites:** General Biology and/or consent of the instructor
A study of fishes. Specimens collected along Eastern Seaboard by students will be used to illustrate anatomy, physiology, and systematics of this major vertebrate group. Field collections will give student opportunity to observe relationships of these animals to the biotic and physical environment.

**MI344 Anatomy of Marine Chordates** var-3sh
**Prerequisites:** Six hours of biology including General Zoology
Designed to familiarize students with various aspects of marine chordates.

**MI345 Marine Ornithology** var-3sh
**Prerequisite:** One year of biology or consent of the instructor
Introduces student to avian fauna of seacoast and enables comparison with inland species. In addition to field work providing visual and vocal identification, lecture material will include information on distribution, behavior, physiology, and anatomy of birds.

**MI362 Marine Geology** var-3sh
**Prerequisites:** MI110 and physical geology or consent of instructor
Studies of structural and sedimentary environments of continental shelf, slopes, and ocean basins and crustal structure of the earth and its relation to sedimentary record and geologic history of oceans.

**MI364 Physical Oceanography** var-3sh
**Prerequisites:** MI110, one year of physics, one semester of calculus, and permission of the instructor
Course includes consideration of physical properties, mass and energy budgets, theory of distribution of variables: cause, nature, measurement, analysis, and prediction of tides, currents, and waves; and basic instrumentation in the field.

**MI420 Marine Micropalcontology** var-3sh
**Prerequisites:** One year of geology and biology or consent of instructor
Deals with modern, living representatives of microorganisms important in fossil record with particular emphasis placed on taxonomy, morphology, evolution, and ecologic affinities of representative groups.

**MI431 Ecology of Marine Plankton** var-3sh
**Prerequisite:** One year of biology
Study of phytoplankton and zooplankton in marine and brackish environments. Qualitative and quantitative comparisons made between the planktonic populations of various types of habitats in relation to primary and secondary productivity.

**MI459 Coastal Geomorphology** var-3sh
**Prerequisite:** One year of geology
A study of coastal geomorphology with emphasis on Late Cenozoic and Pleistocene sea-level changes in response to worldwide continental glaciation. The student will participate in field studies of Pleistocene deposits and the weathering of these deposits.

**MI481 Special Topics** var-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**MI482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**MI 500 Problems in Marine Science** var-3sh
Graduate students or undergraduate students with advanced standing registering for this course may elect either of the following options.
**Option A:** Take a 200, 300, or 400 level MI course and complete, in addition to regular course requirements, a project in the area under direction of instructor.
**Option B:** Complete an independent research project. A research proposal must be approved by the Academic Committee of M.S.C. in advance of the time research is to be undertaken.

## MK Marketing
Department of Marketing
Eberly College of Business

**Note:** All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

**MK320 Principles of Marketing** 3c-0l-3sh
**Prerequisite: EC122**
Study of those activities necessary to the design, pricing, promotion, and distribution of goods and services for use by organizations and ultimate consumers.

**MK321 Consumer Behavior** 3c-0l-3sh
**Prerequisites:** MK320 and PC101
Survey of noteworthy contributions of behavioral science and research on consumer purchasing and decision-making process, with particular attention to formal and informal influence patterns.

**MK350 International Business** 3c-0l-3sh
**Prerequisite:** MG310
A study of the international dimensions of business and the critical environmental and organizational factors that affect managerial approaches in the international arena. Focuses upon the management problems stemming from the movement of goods, human resources, technology, finance, or ownership across international boundaries. (Also offered as MG350)

**MK420 Marketing Management** 3c-0l-3sh
**Prerequisites:** MK320 and 321
Analysis of marketing and operational problems and policies involved in planning, organizing, coordinating, and controlling a total marketing program.

**MK421 Marketing Research** 3c-0l-3sh
**Prerequisites:** MK320 and QB215
Nature, methods, analysis, and application of present-day marketing research techniques utilized in the solution of practical marketing problems.

**MK422 Seminar in Marketing** 3c-0l-3sh
**Prerequisites:** MK420 and 421, graduating senior
A terminal course designed for majors in marketing; considers current literature in the field, case problems pertaining to the total marketing effort, and current problems of actual companies.

**MK430 International Marketing** 3c-0l-3sh
**Prerequisite: MK320**
International marketing and markets are analyzed. Special consideration is given to the significance of government regulations; organization structures of export and import enterprises; and credit policies.

**MK431 Industrial Marketing** 3c-0l-3sh
**Prerequisite: MK420**
Concerned with the major activities involved in the marketing of industrial goods and services, including the industrial marketing system, marketing information needs of the industrial firm, industrial marketing implementation and control, and channel, pricing, product, and promotional strategies for industrial goods.

**MK432 Business and Society** 3c-0l-3sh
Overview of the interactions between business and the larger social system in which it operates. Considers the problems, solutions, and future directions of societal issues and their relationships to the business environment. Topics discussed include consumerism, the morality of advertising, self-regulation, pollution and ecology, overpopulation, government regulation, and the social and ethical responsibilities of business and industry. (Also offered as MG432; may not be taken for duplicate credit)

**MK433 Advertising** 3c-0l-3sh
**Prerequisite: MK320**
Introduction to the principles, practices, and creations of advertising. Use of various media and legal, economic, social, and ethical aspects of advertising are also considered.

**MK434 Marketing Logistics** 3c-0l-3sh
**Prerequisites:** Junior/senior standing, MK320 and MG330
The focus of this course is on planning, organizing, and controlling the marketing logistics function. In addition to the acquisition and application of management science methods, students will integrate and apply previously gained knowledge to analyze and solve complex marketing logistics problems. Areas of major concentration include facility location, transportation, inventory management, and customer service.

**MK481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Covers advanced, innovative, or exploratory topics and disciplines within marketing. Specific content items developed by instructor.
Credits may be applied to either required (by permission of departmental chairperson) or free electives in a student's program. Special topics numbered 481 are primarily for upper-level undergraduate students.

**MK482 Independent Study** var-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office. Approval is based on academic appropriateness and availability of resources.
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

**MK493 Marketing Internship** var-3-12sh
Practical experience in the marketing field to develop knowledge and experience in the practical application of theory to actual problems in a nonclassroom situation. A maximum of 3sh of internship in the student's major may be applied toward the marketing major-area elective requirements. Additional internship credit must be used as free electives only. Admission only by permission of the department chairperson and the dean, Eberly College of Business.

## MS Military Science
Department of Military Science
Academic Affairs Division

**MS101 Introduction to Military Science** 2c-1l-2sh
Study of the organization of the United States Army and the role of the military in today's society. Emphasis is on the customs and traditions of the service, the Total Army concept, and the fundamentals of leadership. Included is instruction in basic military skills, land navigation, and personal nutrition and fitness. Also, see Leadership Laboratory.

**MS102 Fundamentals of Military Science** 2c-1l-2sh
Study of the basic knowledge regarding military service and the profession of arms. Emphasis is on basic military skills, first aid, and the development of leadership abilities through practical exercises. Included is instruction on offensive and defensive tactics, the Army writing style, and military briefings. Also, see Leadership Laboratory.

**MS203 Fundamentals of Tactical Operatinns, Techniques of Leadership, and Weapons Characteristics** 2c-1l-2sh
Organization, techniques, resources, and capabilities involved in conducting small-unit tactical operations. Emphasis is on leadership, organization, and management techniques needed to cause a group of people to accomplish specific objectives. Characteristics of military weapons systems are taught. Students serve as leaders in Leadership Labs.

**MS204 National Security and Fundamentals of Military Topography** 2c-1l-2sh
Study of national security concepts, policies, and the national decision-making process with emphasis on national resources, national will, and economic factors. Included will be a study of nuclear and conventional response options. Fundamentals of military topography including the use of military maps to determine topographic features, to conduct land navigation, and to perform terrain analysis will be covered. Also, see Leadership Laboratory.

**MS305 Fundamentals of Leadership and Modern Learning/Teaching Relationship** 3c-1l-3sh
Study in practical application of principles of leadership/management as applied in classroom and field to include case studies in psychological, physiological, and sociological factors which affect human behavior; individual and group solution of leadership problems common to small units. Also, see Leadership Laboratory.

**MS306 Study of Advance Leader Planning and Execution of Modern Combat Operations** 3c-1l-3sh
Analysis of leader's role in directing and coordinating efforts of individuals and small units in execution of offensive and defensive tactical missions, to include command and control systems, the military team, and communications techniques. Also, see Leadership Laboratory.

**MS407 Management of the Military Complex to Include Fundamentals of Military and International Law** 3c-1l-3sh
Study of the various managerial elements needed to effectively control a military organization and the techniques used to accomplish these functions. Studies in military law and international law prepare the students for their legal responsibilities. Also, see Leadership Laboratory.

**MS408 Seminar in Military Analysis and Management** 3c-1l-3sh
Contemporary analysis of use of military in world affairs to include importance of strategic mobility and neutralization of insurgent movements. Selected management problems and situations will be presented as they relate to military justice, administration, and obligation and responsibilities of an officer. Also, see Leadership Laboratory.

**Leadership Laboratory (one afternoon per week)** var-0sh
A practical experience designed for the attainment and application of leadership principles. Concurrently scheduled in conjunction with all Military Science courses, it provides for practical challenges in personal accomplishment, both physical and mental, and for development of team work and leadership.

**Summer Camp** var-0sh
Students attend a six-week summer camp upun completion of the first year of the Advanced Course. Time at camp is devoted to practical application of principles and theories taught during the preceding school year. While at camp, each student receives lodging, subsistence, uniforms, medical care, reimbursement for travel, and pay in amount of nne-half pay of second lieutenant per month.

## MT Medical Technology
Allied Health Professions Programs
College of Health and Human Services

**MT494 Clinical Microbiology** var-6-10sh
Identification and clinical pathology of bacteria, fungi, viruses, and parasites. Techniques to isolate, stain, culture, and determine antimicrobial susceptibility. Instrumentation; quality control.

**MT495 Clinical Chemistry** var-7-10sh
Enzymology, endocrinology, biochemistry of lipids, carbohydrates, and proteins; metabolism of nitrogenous end products; physiology and metabolism of fluids and electrolytes; and toxicology as related to the body and diseases. The technical procedures include colorimetry, spectrophometry, electrophoresis, chromatography, automation, and quality control.

**MT496 Clinical Hematology/Coagulation** var-4-7sh
The composition and function of blood; diseases related to blood disorders; the role of platelets and coagulation. Manual and automated techniques of diagnostic tests for abnormalities.

**MT497 Clinical Immunohematology** var-3-6sh
Blood antigens, antibodies, crossmatching, hemolytic diseases, and related diagnostic tests. An in-depth study of blood donor service and its many facets such as transfusions, medico-legal aspects, etc.

**MT498 Clinical Immunology/Serology** var-2-4sh
Immune response, immunoglobulins, autoimmunity, and complement and related tests and diseases. Survey and demonstration of serological diagnostic tests.

**MT499 Clinical Seminar** var-0-6sh
Other courses which are not included in the above (such as orientation, laboratory management, education, clinical microscopy) and/or are unique to the individual hospital program.

## MU Music
Department of Music
College of Fine Arts

**MU110 Fundamentals of Theory** 3c-0l-3sh
Rudiments of musical materials: harmonic, melodic, rhythmic, and basic formal procedures of the common practice period including pitch reading, interval construction, scales, and modes.

**MU111 Thenry Skills I** 0c-3l-2sh
Develops aural skills through dictation and interpretation of written music by sight-singing. Taken in conjunction with Theory I.

**MU112 Theory Skills II** 0c-3l-2sh
**Prerequisite:** MU111
Continuing development of aural skills and introduction of keyboard skills. Taken in conjunction with Theory II.

**MU115 Theory I** 3c-0l-3sh
The study of the harmonic, melodic, and formal devices of the common practice period, from simple diatonic chords through secondary dominants.

**MU116 Theory II** 3c-0l-3sh
**Prerequisite:** MU115
The study of the harmonic, melodic, and formal devices of the common practice period, from simple diatonic chords through secondary dominants. Theory II introduces basic music forms.

**MU120 Brass Ensemble** 0c-2l-0/1sh

**MU121 Chamber Singers** 0c-3l-0/1sh

**MU122 University Chorale** 0c-3l-0/1sh

**MU123 Symphnny Band** 0c-3l-0/1sh

**MU125 Marching Band** 0c-6l-0/1sh

**MU126 Music Theater** 0c-6l-0/1sh

**MU127 Percussinn Ensemble** 0c-4l-0/1sh

**MU129 University Symphony Orchestra** 0c-5l-0/1sh

**MU130 String Ensemble** 0c-2l-0/1sh

**MU131 University Wind Ensemble** 0c-3l-0/1sh

**MU133 Woodwind Ensemble** 0c-2l-0/1sh

**MU134 University Chorus** 0c-3l-0/1sh

**MU135 Jazz Ensemble** 0c-3l-0/1sh

**MU136 Advanced Jazz Ensemble** 0c-3l-0/1sh

**MU137 Piano Accompanying** var-1-1 or 0sh
Piano accompanying may be scheduled by qualified pianists from the Department of Music in partial fulfillment of ensemble requirements. The course may be repeated for credit. Pianists registered for this course will provide accompaniments for Department of Music students in solo vocal or instrumental performances in area and departmental recitals and/or in voice and instrumental lessons. Registration for the course must be approved by a designated Department of Music faculty member from the piano area.

**MU151 Class Voice I** 1c-1l-1sh
Conceived for non-Voice majors. Development of correct vocal production techniques through individual and group performance in class. Use of the voice as a tool for theory skills and for eventual use in the music classroom.

**MU152 Class Voice II** 1c-1l-1sh
Continuation of Class Voice I. Resumes development of correct vocal production techniques through performance.

**MU153 Class Piano I** 1c-1l-1sh
Designed for students with no significant background in piano who need to develop functional keyboard skills. Emphasis placed on harmonizing melodies and playing simple accompaniments.

**MU154 Class Piano II** 1c-1l-1sh
Continuation of Class Piano I.

**MU155 Class Strings I** 1c-1l-1sh
For Music Education majors who will develop rudimentary playing techniques sufficient to initiate instruction for beginning students. Emphasis placed on correct playing positions and tone production for violin, viola, cello, and double bass.

**MU157 Class Percussion I** 1c-1l-1sh
A practical introduction to the various instruments of the percussion family. Students will demonstrate correct playing techniques and develop a resource file containing information on percussion instruments and instructional materials as needed by the school music teacher.

**MU159 Class Brass I** 1c-1l-1sh
For Music Education majors who will demonstrate rudimentary playing techniques and tone production skills to initiate beginning instruction. Students will develop playing on trumpet or French horn and trombone, euphonium, or tuba.

**MU161 Class Woodwinds I** 1c-1l-1sh
For Music Education majors who will acquire correct tone production and playing techniques sufficient to initiate beginning instruction. Students will demonstrate skills with flute, clarinet, saxophone, and oboe or bassoon.

**MU163 Class Guitar I** 1c-1l-1sh
Designed for students with no significant background in guitar who wish to develop functional playing skills. Emphasis placed on using the guitar as an accompanying instrument.

**MU211 Theory Skills III** 0c-3l-2sh
**Prerequisites:** MU111, 112
Further development of aural and keyboard skills. Taken in conjunction with Theory III.

**MU212 Theory Skills IV** 0c-3l-2sh
**Prerequisites:** MU111, 112, 211
Culmination of development in aural and keyboard skills. Taken in conjunction with Theory IV.

**MU215 Theory III** 3c-0l-3sh
**Prerequisites:** MU115, 116
Extension of the techniques of the eighteenth and nineteenth centuries to include modulation, altered chords, more advanced musical forms, and contrapuntal procedures.

**MU216 Theory IV** 3c-0l-3sh
**Prerequisites:** MU115, 116, 215
Extension of the techniques of the eighteenth and nineteenth centuries to include modulation, altered chords, more advanced musical forms, and contrapuntal procedures. Theory IV concentrates largely on music and materials of the present century.

**MU217 Keyboard Harmony I** 1c-1l-1sh
**Prerequisite:** Nominal facility at keyboard
Designed to develop keyboard skills so the student may realize and produce in sound basic harmonic progressions.

**MU218 Keyboard Harmony II** 1c-1l-1sh
**Prerequisite:** MU217
Continuation of Keyboard Harmony I, involving chromatic harmony and more complex progressions.

**MU224 Jazz Improvisation Techniques I** 3c-0l-3sh
A study of the basic materials and practices for improvising or extemporaneous playing.

**MU225 Jazz Improvisation Techniques II** 3c-0l-3sh
A continuation of the basic materials and practices for improvising or extemporaneous playing. Makes use of more complicated and involved harmonic progressions utilizing extended choral harmonies.

**MU281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**MU304 Form and Analysis I** 2c-0l-2sh
**Prerequisite:** MU216
Thorough study of smaller forms of music.

**MU306 Counterpoint I** 2c-0l-2sh
**Prerequisite:** MU216
After study and analysis of the style of sixteenth-century contrapuntal writing, student will do original writing using techniques and devices of period. As time permits, same approach will be made to explore style of seventeenth- and eighteenth-century composers.

**MU309 Orchestration I** 2c-0l-2sh
**Prerequisite:** MU216
All instruments of orchestra are studied from the viewpoint of their contribution to the total sound of ensemble. Ranges and timbres are considered, as well as actual arranging of selected music.

**MU311 Fundamentals of Conducting** 3c-0l-2sh
Emphasis placed on fundamental physical skills of conducting process; various beat patterns are mastered and elementary score reading and interpretation are considered.

**MU312 Choral Conducting** 3c-0l-2sh
**Prerequisite:** MU311
Provides an opportunity for the student to apply basic conducting techniques to choral music. Each student conducts the class in standard choral works. Includes survey of suitable literature, organizational problems, voice testing, rehearsal techniques, program building, interpretation, and diction.

**MU313 Instrumental Conducting** 3c-0l-2sh
**Prerequisite:** MU311
Provides the student with an opportunity to apply basic conducting skills to various instrumental ensembles. Includes survey of suitable literature, organizational problems, audition procedures, rehearsal techniques, program building, and interpretation.

**MU331 Elementary Methods** 3c-0l-3sh
Includes analytical study of texts, recordings, equipment, instruments, and other materials suitable to musical development of elementary pupils; proper treatment of child voice; selection, use, and teaching of rote songs; rhythmic activities and development; music reading; part singing; planning and organization; guided observations; and evaluation techniques.

**MU333 Secondary Methods** 3c-0l-3sh
Includes General Music Class, choral organizations, changing voice, techniques of instruction, including team teaching and programmed learning, high school theory courses, high school music literature courses, scheduling, administrative problems, curriculum development, evaluation of materials and equipment, evaluative techniques, and guided observation. Extra laboratory sessions are required.

**MU335 Music for the Exceptional Student** 2c-2l-2sh
Develops music education skills, techniques, and materials for the emotionally, mentally, physically, or neurologically handicapped student and the gifted. Designed for students in music education, special education, and elementary education.

**MU337 General Music in Middle Schools** 3c-0l-3sh
**Prerequisite:** MU331
This course will provide general practices and pedagogy related to recent standards for a comprehensive, sequential middle school general music curriculum. Specific focus on curriculum development, lesson planning, instructional strategies, adolescent behavioral characteristics, as well as diverse materials and resources.

**MU340 Woodwind Instrument Repair** 0c-2l-2sh
**Prerequisites:** MU133, Teacher Certification
This course is designed for students preparing for teaching careers in instrumental music. Instruction will be conducted in a laboratory setting and will include development of the diagnostic and repair skills necessary to deal with the problems most frequently encountered in a public school classroom on the clarinet, flute, and saxophone.

**MU351 Italian Diction and Literature** 2c-0l-2sh
For first-semester voice majors, this class meets for two hours per week. Emphasis is on pronunciation for the stage and readings of Italian song texts. Italian madrigals, solo song literature, and operatic repertoire are also studied.

**MU353 French Diction and Literature** 2c-0l-2sh
For third- or fourth-semester voice majors, this class meets for two hours per week. Emphasis is on pronunciation for the stage and the International Phonetic Alphabet. French solo song literature and operatic repertoire are also studied.

**MU354 German Diction and Literature** 2c-0l-2sh
For second-semester voice majors, this class meets for two hours per week. Emphasis is on pronunciation for the stage. German solo song literature as well as Bach chorales are studied.

**MU405 Piano Pedagogy** 3c-0l-3sh
Prerequisites: Junior standing in Piano and a Piano major or minor
Survey of current and significant past developments in teaching of piano, both privately and in small and large classes. The various piano methods are analyzed, compared, criticized, and adapted to each individual's use.

**MU406 Voice Pedagogy** 3c-0l-3sh
Prerequisites: A voice major or minor and permission of the instructor
Survey of current and past development in teaching of voice, both privately and in small and large classes. The various vocal methods are analyzed, compared, criticized, and adapted to each individual's use.

**MU408 Marching Band Techniques** 2c-0l-2sh
Considers building a band show; alignment of ranks and files; development of a standard pace of 5 to 5 and 8 to 5; selection of music; instrumentation; techniques of developing morale; and fundamentals of uniform design.

**MU411 Composition I** 2c-0l-2sh
**Prerequisite:** MU216
Instruction is individualized. Compositional devices studied through analysis of works by major composers. Students will write several original compositions utilizing smaller forms.

**MU412 Composition II** 2c-0l-2sh
**Prerequisite:** MU411
Continuation of Composition I.

**MU413 Composition III** 2c-0l-2sh
**Prerequisite:** MU412
Students will write several original compositions utilizing larger forms.

**MU414 Composition IV** 2c-0l-2sh
**Prerequisite:** MU413
Continuation of Composition III. Outstanding works will be programmed by university performing ensembles.

**MU475 Music Lab** var-0sh
All music majors must attend eight recitals per semester and all departmental recitals, as well as all recitals for their respective performance areas.

**MU481 Special Topics** 3c-0l-3sh
Prerequisite: As appropriate to course content
May provide an in-depth study of a narrowly defined area of the discipline. Subject matter will change with repeated offering of the course. May be repeated for credit.

**MU482 Independent Study** var-1-6sh
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**MU493 Internship in Music** var-1-6sh
Designed for music majors who wish to receive practical experience working with people in music or in areas related to music.

# NT Nuclear Medicine Technology
Allied Health Professions
College of Health and Human Services

**NT427 Nuclear Scintigraphy** 3c-0l-3sh
Theoretical aspects of nuclear medicine imaging procedures, including applicable pathophysiology, technical aspects for data acquisition, and computer analysis of data. Systemic radionuclide therapy procedures are also discussed.

**NT428 Radiation Physics** 3c-0l-3sh
Applicable aspects of nuclear and atomic physics are covered both in theory and mathematical formulae. Theoretical topics include atomic and nuclear structure, radioactive decay, interactions with matter, and radionuclide production methods. Mathematical concepts discussed are the decay equation, equilibrium, and radiation dosimetry.

**NT429 Nuclear Medicine Instrumentation** 2c-1l-3sh
This course covers the basic principles of both in vitro and in vivo instrumentation. The design, operation, and quality control of gas detectors and scintillation detectors are covered. Survey equipment, spectrometers, and stationary imaging devices are presented with their application to nuclear medicine. Hands-on laboratory experience with single channel analyzers and Anger cameras is included.

**NT430 Radiation Biology and Radiation Protection** 2c-0l-2sh
Topics include ionization and energy transfer: molecules, cellular, tissue, and organ response to radiation; acute and chronic effects of radiation; radiation protection; licensing requirements; recordkeeping; and management of clinical radiation spills.

**NT431 In Vivo/In Vitro Non-Imaging** 1c-0l-1sh
In vivo clinical nuclear medicine procedures not resulting in images as well as principles of in vitro radioassay are presented. Included are venipuncture, blood volumes, red cell studies, Schillings test, principles of immunology, various types of radioassay, and sensitivity and specificity of procedure.

**NT432 Radiopharmaceuticals** 3c-0l-3sh
Topics include tracer theory, pharmacological actions, localization methods, radiopharmaceutical properties, radionuclide generators, radiopharmaceutical preparations and quality control, and transient vs. secular equilibrium. Routinely used radiopharmaceuticals are discussed.

**NT433 Introduction to Tomographic Imaging** 1c-0l-1sh
An introduction to the basic principles of cross-sectional anatomy and tomographic imaging is presented. Topics include body planes and cross-sectional anatomy of the heart, brain, liver, and lumbar spine, as applicable to nuclear medicine, and the theory and application of both SPECT and PET imaging systems.

**NT434 Clinical Nuclear Medicine** 0c-40l-16sh
Prerequisites: Completion of 77 credits at IUP and Phase I and NMI
Students complete 1,320 hours of supervised clinical training at an affiliate hospital. Students receive instruction and participate in the performance of various clinical nuclear medicine procedures, patient care, administrative duties, radiopharmaceutical preparation and quality control, equipment quality control, quality assurance, and radiation safety. Students develop both their technical skills and interpersonal communication skills for incorporation into the medical community and to provide quality patient care.

## Nursing
Department of Nursing
College of Health and Human Services

**NU280 Introduction to Nursing** 3c-0l-3sh
Prerequisite: Nursing majors only
Introduces the major concepts of concern to nursing: persons in their environments, health, and the profession of nursing. Topics include the nurse's role as provider of care and member of a profession; the nursing process as the mode of practice; the value of research as a basis for nursing practice; biophysical and psychosocial components of wellness.

**NU281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**NU285 Introduction to Clinical** 0c-9l-3sh
**Prerequisite:** Nursing majors only
A clinical and college laboratory course which provides the opportunity to practice the use of the nursing process. Emphasis is placed on assessment and basic intervention skills.

**NU302 Core I** 2c-0l-2sh
**Prerequisite:** NU280
Emphasizes the involvement of nurses and nursing in selected aspects of wellness promotion and maintenance. The theory base for the use of the nursing process to support individuals and families through maturational change and the childbearing cycle is presented.

**NU303 Clinical Laboratory I** 0c-14l-5sh
**Prerequisites:** NU280, 285
A clinical laboratory course which enables the student to care for individuals and families across the life span. Guided experiences are provided in hospital and community-based facilities. The nursing process is utilized to promote and maintain wellness in individuals within families.

**NU304 Core II** 2c-0l-2sh
**Prerequisite:** NU302
Emphasizes the involvement of nurses and nursing in selected aspects of wellness, promotion, maintenance, and restoration. The theory base for the use of the nursing process is expanded to include family, community health, and transcultural nursing concepts.

**NU305 Clinical Laboratory II** 0c-14l-5sh
**Prerequisite:** NU303
A clinical laboratory course which enables the student to provide care to individuals and families with acute and chronic health problems across the life span. Guided experiences are provided in hospital and community-based facilities and individuals' homes. The nursing process is utilized to promote, maintain, and restore optimal wellness in individuals within families.

**NU322 Maintenance and Restoration of Wellness I** 3c-0l-3sh
**Prerequisites:** NU280, 285
Introduces pathophysiologic change in individuals across the life span and associated nursing management. Topics include caring for the individual who requires surgery or whose alteration in health is related to problems in oxygenation, nutrition, and fluid and electrolyte balance.

**NU323 Maintenance and Restoration of Wellness II** 3c-0l-3sh
**Prerequisite:** NU322
Physiologic and psychologic pathology in individuals across the life span and associated nursing management. Topics include caring for the individual whose alteration in health is related to problems with reproductive, cognitive-perceptual, motor, metabolic, and elimination function.

**NU402 Core III** 2c-0l-2sh
**Prerequisite:** NU304
Emphasizes the nurse's roles as accountable provider and coordinator of care and member of a profession. The specific issues that are addressed are quality assurance in provision of patient care; rights and responsibilities of the individual, the nurse as an employee, and the employer; current environmental health concepts.

**NU403 Clinical Laboratory III** 0c-14l-5sh
**Prerequisite:** NU305
A clinical laboratory course which affords the opportunity to apply the nursing process as provider and coordinator of care with individuals and families experiencing complex health care needs in a variety of health care facilities.

**NU404 Core IV** 2c-0l-2sh
**Prerequisite:** NU402
Emphasizes the nurse's roles as provider and coordinator of care in health care facilities and in emergency and disaster situations. Concepts and principles related to the management of the health care team, community health, and rehabilitation are addressed.

**NU405 Clinical Laboratory IV** 0c-14l-5sh
**Prerequisite:** NU403
A clinical laboratory course which affords the opportunity for the application of critical thinking, health teaching, and management skills. Emphasizes development of the caregiver role in selected areas of clinical practice; development of the care provider and coordinator roles in inpatient and community settings with individuals and families experiencing complex health care needs; integration of the roles of provider and coordinator of care and member of a profession.

**NU407 Skills for Professional Success** 1c-0l-1sh
**Prerequisite:** must be enrolled in senior level nursing courses
This one-credit elective for senior nursing majors is designed to help students foster clinical judgment skills by focusing on critical thinking and test-taking. Emphasis is placed on preparing students with the skills that are essential for success on the National Council Licensure Examination for Registered Nurses (NCLEX-RN).

**NU422 Maintenance and Restoration of Wellness III** 3c-0l-3sh
**Prerequisite:** NU323
Emphasizes pathophysiology and psychopathology for understanding the complex process of the individual's adaptation to crisis. The theory base for the application of the nursing process in the care of individuals requiring hospitalization, life-sustaining treatment, intensive monitoring, and crisis intervention is discussed.

**NU423 Maintenance and Restoration of Wellness IV** 3c-0l-3sh
**Prerequisite:** NU422
Emphasizes strategies used in assisting individuals and their families in the promotion, maintenance, and restoration of optimal wellness. The theory base for the application of the nursing process when illness is being managed in acute, long-term care, and community settings is discussed.

**NU430 Nursing Research** 3c-0l-3sh
**Prerequisite:** MA217
Focus on evaluating research through a study of research design, methodologies, sampling, data analysis, and significance of findings. Consideration is given to issues in conducting research and the impact on problems investigated, the nurse researcher, and the consumer of research.

**NU480 Seminar in Nursing** 1c-0l-1sh
**Prerequisites:** NU280, 285
A seminar which provides a forum for the exploration and discussion of issues relevant to the professional nurse. Emphasis is placed on the development of professional values, critical thinking, decision-making, and communication skills. A selection of topics on current issues and trends will be offered each semester; each will focus on a particular theme related to nursing practice. One credit hour of seminar is required in each semester in the upper-division nursing courses.

**NU481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**NU482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

# OS Office Systems

Department of Office Systems and Business Education
Eberly College of Business

**Note:** All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

**OS281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**OS301 Advanced Microcomputer Applications** 3c-0l-3sh
**Prerequisite:** BE/CO/IM 101, or permission of instructor
Advanced applications of microcomputing software from the user perspective to enhance productivity of office employees, executive and managerial, professional, and support personnel. Comparative and evaluative techniques for appropriate selection and implementation of software. Word processing, spreadsheet, database, desktop publishing, utility, and operating system software will be emphasized.

**OS313 Office Systems Technologies** 3c-0l-3sh
**Prerequisite:** Junior standing
Emphasis on systems hardware, especially the microcomputer. Concepts and design principles common to all microprocessors are studied. Auxiliary hardware, such as reprographics, printers, modems, scanners, and laser technology will be included.

**OS315 Records Administration** 3c-0l-3sh
**Prerequisite:** BE/CO/IM101 or permission of instructor
Development of the goal of records administration as a system including the input, process, and output components. Records creation, records classification systems, evaluation, retention programs, manual through automated information systems, image technology, form design, record control systems, records manuals, and disaster prevention and recovery will be discussed. (Offered as OS415 prior to 1995-96)

**OS400 Telecommunications** 3c-0l-3sh
**Prerequisite:** BE/CO/IM101
Knowledge and concepts of telecommunications technology, applications, and management as they apply to office systems.

**OS411 Microcomputer Support for Office Systems** 3c-0l-3sh
**Prerequisites:** OS301, 313, and OS400
Includes three dimensions of study relative to office systems—helpdesk management, training and development, and ergonomics. Incorporates practical applications for delivering technical support through the operation of a helpdesk. Requires development and delivery of technological applications and a field study of ergonomic office designs.

**OS412 Administrative Office Services** 3c-0l-3sh
Presentation of fundamental principles and practices used in the development of an office. Specialized areas such as systems analysis, work simplification, forms design, information processing, office machines and equipment, records management, office design and layout, office location and physical environment, office supervision, office manuals, and development of office personnel will be discussed.

**OS413 Information Processing Technology** 3c-0l-3sh
A comprehensive study of information processing including equipment selection/functions, personnel, and procedures.

**OS480 Seminar in Office Systems** 3c-0l-3sh
**Prerequisites:** Graduating seniors only or permission of instructor
Emphasis on the solving of office management problems. Provides an opportunity to integrate and apply the skills and knowledge previously gained in the Office Systems major. (Offered as AD430 prior to Summer, 1991; offered as OS430 until 1995)

**OS481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**OS482 Independent Study** var-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**OS493 Internship** var-3-6sh
**Prerequisites:** Approval of internship coordinator, chairperson, and dean and 2.75 overall GPA and 3.0 GPA in Business
A supervised office experience program with an approved agency (business, industry, and government).

# PC Psychology

Department of Psychology
College of Natural Sciences and Mathematics

**PC101 General Psychology** 3c-0l-3sh
An introduction to the scientific study of behavior and mental processes.

**PC280 Psychological Inquiry** 3c-0l-3sh
**Prerequisites:** PC101, Psychology minors
Introduces students minoring in Psychology to issues central to carrying out and interpreting empirical research in the field. Students will become more sophisticated consumers of empirical research findings. Students who have successfully completed PC290 are not permitted to take this course for credit.

**PC290 Research Design and Analysis I** 3c-2l-4sh
**Prerequisites:** PC101, MA217
A laboratory course devoted to designing, conducting, and evaluating results of psychological experiments.

**PC291 Research Design and Analysis II** 3c-2l-4sh
**Prerequisites:** PC101, "C" or better in PC290
A continuation of Research Design and Analysis I.

**PC310 Developmental Psychology** 3c-0l-3sh
**Prerequisite:** PC101
Comprehensive study of all factors that contribute to human development from conception to death, particularly as they relate to psychological development of individual. A survey course directed at students not planning to take PC311, 312, or 373. Students may receive credit towards the Psychology major or minor for only one of PC310, PC311, or PC315.

**PC311 Child Psychology** 3c-0l-3sh
**Prerequisite:** PC101
Study of factors that influence total development and behavior of child. Current theories and research are considered, with focus upon optimum development of individual. Credit toward a major or minor in psychology will not be given for both PC310 and 311.

**PC312 Adult Development and Aging** 3c-0l-3sh
**Prerequisite:** PC101
A survey of physiological, cognitive, emotional, and social issues affecting the young adult, the middle-aged, and the elderly. Includes an examination of significant adult life crises.

**PC315 Experimental Development Psychology** 3c-2l-4sh
**Prerequisite:** PC280 or PC290
The course will study human development from conception to death with emphasis on the physical, cognitive, and emotional domains. Students will be involved in observation and data collection.

**PC320 Personality** 3c-0l-3sh
**Prerequisite:** PC101
Provides comparative analysis of major representative traditional and contemporary theories of personality.

**PC321 Abnormal Psychology** 3c-0l-3sh
**Prerequisite:** PC101
The description, causes, and treatment of behaviors labeled abnormal in our society are studied from experimental and clinical points of view.

**PC322 Introduction to Psychological Measurement** 3c-0l-3sh
**Prerequisites:** PC101, MA217
Survey of psychological measurement techniques, with emphasis on theoretical assumptions underlying these techniques and discussion of interpretation and limitations of measuring instruments.

**PC330 Social Psychology** 3c-0l-3sh
**Prerequisite:** PC101
The study of the effects of the social environment on human behavior. Topics include perception of person, attitude formation and change, and small-group interaction. Students may not receive credit toward psychology major or minor for both PC330 and PC335.

**PC331 Environmental Psychology** 3c-0l-3sh
**Prerequisite:** PC101
The study of the relationship between human behavior and its environmental context. Emphasis on the physical environment, both natural and built.

**PC335 Experimental Social Psychology** 3c-2l-4sh
**Prerequisite:** PC280 or PC290
A laboratory course in the effects of the social environment on human behavior. Topics include perception of persons, attitude formation and change, and small-group interaction. Includes experience with social psychological research methods. May not be taken for credit by students who have completed PC330.

**PC341 Conditioning and Learning** 3c-2l-4sh
**Prerequisites:** PC101, 290
Examination of the basic principles of learning and related phenomena; discussion of classical conditioning, discrimination learning, and aversive control of behavior.

**PC342 Human Cognition: Memory and Thinking** 3c-2l-4sh
**Prerequisites:** PC101, 290
Study of methods and findings in areas of human memory and human information processing. Students may not receive credit towards the psychology major or minor for both PC342 and PC345.

**PC345 Introduction to Human Cognition** 3c-0l-3sh
**Prerequisite:** PC101
This course is designed to provide an overview of cognitive psychology. The Information Processing Model is contrasted with its predecessor, Behaviorism, and its contemporary challenger, Connectionism.

**PC350 Physiological Psychology** 3c-2l-4sh
**Prerequisites:** PC101, 290
Study of the relationship between behavior and the anatomy and physiology of the nervous system. Students may not receive credit towards the Psychology major or minor for both PC350 and PC356.

**PC355 Comparative Psychology** 3c-0l-3sh
**Prerequisite:** PC101
Survey of animal behavior patterns and control mechanisms including learning, development, communication, and social behavior. Emphasis is on the relationship of the animal to its environment and on the relationship of animal models to human behavior.

**PC356 Biopsychology** 3c-0l-3sh
**Prerequisites:** PC101
Study of the relationship between behavior and the anatomy and physiology of the nervous system.

**PC371 Human Motivation** 3c-0l-3sh
Prerequisite: PC101
Systematic study of how behavior is initiated, sustained, directed, and terminated. Current theories in this area are critically reviewed.

**PC372 Drugs and Behavior** 3c-0l-3sh
**Prerequisites:** PC101 and junior standing or permission
Survey of the current knowledge concerning the actions of drugs. Topics will include legal and social issues surrounding drug use, hazard potential of commonly used drugs, review of current theories and issues regarding the use of drugs in psychotherapy, and consideration of treatment approaches for addiction.

**PC374 Stress and Coping** 3c-0l-3sh
**Prerequisite:** PC101
Fundamental concepts and findings in stress and stress-related disorders. Relationships of stress to disease and methods for coping with stress are presented.

**PC375 Mass Media and Behavior** 3c-0l-3sh
**Prerequisites:** PC101 and junior or senior status
Theory and research on the influence of the mass media on human behavior and attitudes. Topics include: the effects of news and political advertising on public opinion; the effects of racist and sexist portrayals; and the effects of violence and pornography on aggressive behavior. (Also offered as CM375; may not be taken for duplicate credit)

**PC376 Psychology of Health Behavior** 3c-0l-3sh
**Prerequisite:** PC101
An examination of the role of behavior factors in health status with a strong focus on preventive health behaviors and the role of the psychologist in promotion of health-related behavioral changes.

**PC378 Psychology of Death and Dying** 3c-0l-3sh
**Prerequisite:** PC101
Theories and research which delineate the psychological factors affecting the dying person as well as those persons close to one who is dying are discussed.

**PC379 Psychology of Human Sexuality** 3c-0l-3sh
**Prerequisite:** PC101
Provides an overview of the psychological issues and research relevant to sexuality with an emphasis on gender roles. Social, psychological, and gender perspectives are used to examine a number of topics, including contemporary sexual attitudes, sexual response, sexual relationships, sexual dysfunction, sexual variations, sexual preference, and sexual violence. Research pertaining to each topic is presented. Students are encouraged to critically evaluate research and theory and to make connections between the material and their personal experience.

**PC390 Industrial-Organizational Psychology** 3c-0l-3sh
**Prerequisites:** PC101, MA214/217
The study of psychological principles in work organizations; application of psychological theory to the understanding and explanation of individual behavior and experience in work organizations. May not be taken for credit by students who successfully completed PC425. (Formerly PC420)

**PC410 Historical Trends in Psychology** 3c-0l-3sh
**Prerequisite:** PC101, junior or senior standing or permission
Comprehensive overview of historical antecedents of contemporary psychology with emphasis on their implications for future developments in the field.

**PC411 Psychology of Women** 3c-0l-3sh
**Prerequisites:** PC101, junior or senior standing or permission of the instructor
A critical examination of the assumptions about women which are held by the discipline of psychology, considering both current research and individual experience. The psychological effects of socialization on sex role identity, achievement, interpersonal power, mental health, and critical incidents in female development are discussed in the context of relevant concepts from developmental and social psychology.

**PC421 Psychology of Work** 3c-0l-3sh
**Prerequisite:** PC291
The analysis, measurement, prediction, and development of human aptitude, ability, and performance in work and employment situations.

**PC425 Experimental Organizational Psychology** 3c-2l-4sh
**Prerequisite:** 12 credits of psychology (including PC290, beyond PC101)
Introduces the student to theory, research, and methods in the investigation of human behavior and experience in organizations. Both classical and current literature in the field are discussed. In addition to lecture, students will conduct empirical research projects.

**PC450 Introduction to Clinical Psychology** 3c-0l-3sh
**Prerequisites:** PC101, 320, 321, and permission of instructor
Overview of clinical psychology, with emphasis on clinician's use of methods of evaluation and on treatment and modification of behavior.

**PC480 Honors Seminar in Psychology** 3c-0l-3sh
A seminar in the graduate tradition with a specialized topic. May be taken more than once to a maximum of 6sh.

**PC481 Special Topics in Psychology** var-1-3sh
Prerequisites: As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students. May be taken more than once to a maximum of 6sh.

**PC482 Independent Study in Psychology** var-1-3sh
**Prerequisites:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Individual students pursue their particular interests in psychology in consultation with a member of the staff. May be taken more than once to a maximum of 6sh. Approval is based on academic appropriateness and availability of resources.

**PC493 Psychological Practicum** var-1-12sh
Prerequisites: PC101 and department consent
Under supervision of psychology department, selected students receive experience in application of psychological techniques. May be taken more than once to a maximum of 12sh.

## PH Philosophy
Department of Philosophy and Religious Studies
College of Humanities and Social Sciences

**PH101 Informal Logic: Methods of Critical Thinking** 3c-0l-3sh
Designed to develop students' ability to analyze critically deductive and inductive argumentation, rhetoric, and persuasion, by examples drawn from media, textbooks, advertising, scholarly works, personal contacts, etc.

**PH120 Introduction to Philosophy** 3c-0l-3sh
Designed to acquaint the beginning student with philosophical problems and methods in such areas as metaphysics, epistemology, logic, and value theory.

**PH221 Symbolic Logic I** 3c-0l-3sh
An introduction to fundamental concepts in deductive logic with an emphasis on teaching students the basis of clear logical thought. Some of the historical origins of logical theory are explored. Students learn to symbolize arguments in the truth-functional logic and the predicate logic. Ways of testing arguments for validity as well as proofs are covered, with a stressing of application to actual arguments drawn from numerous sources in the media, philosophical issues, and moral problems.

**PH222 Ethics** 3c-0l-3sh
An investigation of efforts to rationally justify moral judgment. Deals with fundamental issues such as: What is morality? Are moral notions cultural, rational, divine, or innate in origin? Are they relative or absolute? Are they freely chosen or determined by genetics and/or environment? Covers a variety of ethical theories significant both historically and contemporarily and applies those theories to current issues which involve moral dilemmas.

**PH223 Philosophy of Art** 3c-0l-3sh
Investigates some of the major problems in the philosophy of art, e.g., the nature of beauty and the aesthetic experience, the ethics and politics of art, creativity, the nature of the work of art and aesthetic objects, the concept of fine art, and the evaluation of works of art and aesthetic objects.

**PH232 Philosophical Perspectives on Love, Marriage, and Divorce** 3c-0l-3sh
Examines the philosophical foundations of contemporary Western institutions and ideologies of romantic love. Considers major positions in both the history of philosophy and contemporary philosophy. Investigates the concepts, problems, and philosophical theories central to understanding romantic love, marriage, and divorce.

**PH281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**PH321 Symbolic Logic II** 3c-0l-3sh
**Prerequisite:** PH221 or permission of instructor
A continuation of Symbolic Logic I designed to enable students to evaluate consistency of statements, validity of arguments, soundness and completeness of formal systems. Focus on quantificational calculus and inductive logic.

**PH323 Political Philosophy** 3c-0l-3sh
An inquiry into the philosophical concepts underlying the major political theories from ancient Greece to the modern era. Emphasis will be placed on major authors and texts to demonstrate a continuum of ideas and their modifications, replacement, and revival, as well as novel political ideas. Possible topics: commonality; peace; internationalism; sovereignty; nature of the state; law; the ruler; cosmopolitanism; nationalism; social contract; liberty; obligation; property; racism; sexism; slavery.

**PH324 History of Philosophy I: Ancient and Medieval** 3c-0l-3sh
Western philosophy of pre-Socratic, classical Greek, Roman, and medieval periods. Special attention given to Plato, Aristotle, Augustine, and Aquinas, as well as the philosophic schools.

**PH325 History of Philosophy II: Renaissance and Modern** 3c-0l-3sh
Continuation of PH324, beginning with fifteenth-century Renaissance thought and ending with the nineteenth-century precursors of contemporary philosophies.

**PH326 Phenomenology and Existentialism** 3c-0l-3sh
A study of the phenomenological method as developed by Edmund Husserl and of the subsequent phenomenological movement as exemplified in the works of such representative figures as Heidegger, Merleau-Ponty, and Paul Ricoeour and of existentialism both as an independent movement of thought and as influenced by phenomenology and exemplified in the works of such representative figures as Kierkegaard, Jaspers, Marcel, Bober, and Sartre.

**PH330 Philosophy of Science** 3c-0l-3sh
An investigation into the nature of formal and empirical sciences: structure of scientific thought and its dependence upon or independence of theory; the logical and metaphysical status of scientific laws and theoretical concepts; reductionism in science; the concept of causality; the logic of explanation; problems in confirmation theory; science and value. No special background required. Recommended for math and science majors.

**PH400 Ethics and Public Policy** 3c-0l-3sh
An analysis of the ethical dimension of public policies. Provides a general understanding of ethical theories, then focuses on their application to specific policy issues. Topics will vary from semester to semester. See current schedule of classes.

**PH405 Justice and Human Rights** 3c-0l-3sh
An introduction to theories of justice and an analysis of the concept of human rights which is central to a just society and to much moral, political, and legal dispute. This course will explore relevant major positions in the history of philosophy, but its major focus is contemporary and raises issues such as women's rights, black rights, animal and environmental rights, welfare rights, and rights to life (or death).

**PH410 Contemporary Analytic Philosophy** 3c-0l-3sh
Investigation of twentieth-century Western positions such as pragmatism, logical positivism, logical and linguistic analysis.

**PH420 Metaphysics** 3c-0l-3sh
A study of the nature of reality in general and of the main categories through which it is understood. The main topic areas of metaphysics concern: the one and the many; the relation of thought and being; the problem of universals; nominalism; realism; idealism; the nature of being, substance, essence, space, time, eternity, matter, mind; determinism and indeterminism.

**PH421 Theory of Knowledge** 3c-0l-3sh
Investigation into problems involved in knowledge and justification and a consideration of methods suggested for their resolution. Particular attention is paid to issues such as knowledge, justification, certainty, objectivity, perception, and truth.

**PH450 Philosophy of Law** 3c-0l-3sh
An examination of the nature of law and its relationship to such questions as morality, obligation, judicial review, justice, rights, punishment, liberty. The course combines philosophical theory with consideration of selected court cases to develop a philosophical and legal understanding of law and its place in society.

**PH460 Philosophy of Language** 3c-0l-3sh
An investigation of issues in the philosophy of language and related issues in linguistics (including anthropological linguistics, sociolinguistics, and psycholinguistics). Topics include, for example, the influence of language on perception, rationalist/empiricist perspectives on language acquisition, language and political control, reference, meaning, and truth.

**PH481 Special Topics** var-l-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**PH482 Independent Study** var-1-6sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. May be taken more than once to a maximum of 6sh. (This option is available to both philosophy majors and nonmajors.)

**PH482 Independent Study: Honors Project** 3c-0l-3sh
**Prerequisites:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office. 3.00 QPA. 15sh in Philosophy, and 3.20 average in departmental courses
Majors in Philosophy are invited to take 3sh of independent study designated Honors Project. Upon satisfactory completion, graduation with departmental honors is possible.

**PH493 Internship in Philosophy** var-3-6sh
**Prerequisites:** Permission of the department, junior or senior PH major or double major, 2.5 QPA
A supervised experience of no longer than one semester and no less than five weeks. This would take place in either a public or private organization in areas that either extend and develop or complement coursework in Philosophy. Log and/or major paper required. Internships are to be done with a clear analysis, argumentation, and examination of governing principles.

## PS Political Science
Department of Political Science
College of Humanities and Social Sciences

**PS101 World Politics** 3c-0l-3sh
Analysis of contemporary (post-1945) state system and forces shaping the world in which we live. Student is given a framework within which to analyze contemporary international politics.

**PS111 American Politics** 3c-0l-3sh
Introduction to American national government and politics, emphasizing Constitution, party system, Congress, Presidency, courts, and problems in national-state relations, civil rights, foreign policy, and social and economic policies.

**PS250 Public Policy** 3c-0l-3sh
Emphasizes dynamics of government as they are evidenced in public opinion, pressure groups, political parties, and our governmental institutions; attention also directed toward the political-economical nexus within American society.

**PS251 State and Local Political Systems** 3c-0l-3sh
Institutions and processes of state and local governments, with special attention to Pennsylvania; emphasis on the nature of federalism, state constitutions, and role of state and local government in an urban society.

**PS280 Comparative Government I: Western Political Systems** 3c-0l-3sh
Analyzes Western political systems with emphasis upon major contemporary democratic governments of Europe. Analyzes and compares their political cultures, political institutions, and political processes.

**PS281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**PS282 International Relations** 3c-0l-3sh
Provides a conceptual framework for understanding sovereignty, nationalism, power, security, dispute settlement, and diplomatic, legal, economic, and military relations of nation-states. (Offered as PS281 prior to June, 1991)

**PS283 American Foreign Policy** 3c-0l-3sh
Examines formulation and execution of American foreign policy, with attention to governmental institutions, mass media, interest groups, and public opinion; emphasizes contemporary problems.

**PS285 Comparative Government II: Non-Western Political Systems** 3c-0l-3sh
Analyzes major non-Western political systems with emphasis upon authoritarian and totalitarian systems. Analyzes and compares in a systematic manner their political cultures, political institutions, and political processes.

**PS300 Research Methods in Political Science** 3c-0l-3sh
**Prerequisite:** PS101 or 111
An examination of the application of the scientific approach to the investigation of social and political phenomena. Concentrates on approaches, methods, and computer tools. All political science majors and minors are strongly urged to enroll.

**PS320 International Law** 3c-0l-3sh
**Prerequisites:** PS101, 281, or permission of instructor
Study of the development, nature, and function of international law, including recent trends.

**PS321 International Organizations** 3c-0l-3sh
**Prerequisites:** PS101, 281, or permission of instructor
Inquiry into purposes, structures, and actions of contemporary international political organizations, such as United Nations, regional, and functional organizations.

**PS346 Political Sociology** 3c-0l-3sh
**Prerequisites:** PS111, SO151
Examines (a) who controls the state and state policy. (b) the role the state plays in stabilizing capitalism and protecting the power of the upper class. (c) the political activities of the middle and upper class. (d) labor, civil rights, welfare rights, and social movements in America. Cross-listed in Sociology as SO458: Political Sociology.

**PS350 The Presidency** 3c-0l-3sh
Examination of the Office of President, with attention to constitutional foundations, evolution, structure, powers, and functions; some comparisons between presidential and parliamentary systems and between offices of President and Governor.

**PS351 Legislative Process** 3c-0l-3sh
Functional study of legislative bodies and process of legislation, covering organization of legislative assemblies, operation of committee system, procedures, bill drafting, aides, and controls over legislation.

**PS353 American Political Parties** 3c-0l-3sh
The role of people, parties, and pressure groups in politics of American democracy; attention to sectional and historical roots of national politics, voting behavior, pressure group analysis, and campaign activities.

**PS354 Metropolitan Problems** 3c-0l-3sh
Analyzes multiplicity of problems facing our metropolitan areas. Contemporary developments such as urban renewal, shrinking tax base, federal aid to cities, subsidized mass transit, municipal authorities, and political consolidation are examined.

**PS355 Intergovernmental Relations** 3c-0l-3sh
Explores characteristics of federal systems of government, with emphasis on theories, origins, institutions, problems in intergovernmental relations in the United States, federal systems in other nations, and trends.

**PS356 Mass Media in American Politics** 3c-0l-3sh
Variant theories of the symbolic relationship between American politics and the press are examined in the light of the American colonial-national experience. The special Constitutional rights given to the media are explored, with particular attention to radio-TV.

**PS358 Judicial Process** 3c-0l-3sh
**Prerequisite:** PS111
Explores nature and limits of judicial power, courts as policymaking bodies, selection of judges, decision process, external forces impinging on the courts, and role of Supreme Court in its relationship with Congress, the Presidency, and federalism.

**PS359 Constitutional Law and Civil Liberties** 3c-0l-3sh
**Prerequisite:** PS111
Study of civil liberties and civil rights issues through leading Supreme Court decisions; topics treated include First Amendment rights, procedural due process and the Bill of Rights, and Equal Protection problems in civil rights.

**PS360 Classical Political Thought** 3c-0l-3sh
**Restriction:** Not for credit after PH323
The origins and development of Western thought from Plato and Aristotle through Cicero and Saint Aquinas. The focus is especially on political participation as a way of life, the unity of political and moral conceptions in premodern political thought, and the relationship between order and justice.

**PS361 Modern Political Thought** 3c-0l-3sh
Covers the major representatives of modern political thought since the Renaissance. Follows the development of the specifically modern notion of the state and political action through the works of Machiavelli, Hobbes, Locke, Rousseau, Marx, and Lenin. Emphasis on the "instrumentalist" state and the idea of a political science.

**PS362 American Political Thought** 3c-0l-3sh
Covers a variety of American political ideas from the Puritans through recent radical and conservative critiques of American liberal democracy. Focus on the continuing development of the idea of individual rights, the political theory of the Constitution, and the tension between classical liberalism and popular rule.

**PS370 Introduction to Public Administration** 3c-0l-3sh
Theories of organization and structural organization, personnel processes, executive functions, financial administration, the politics of administration, public relations, and problems of democratic control of bureaucracy.

**PS371 Issues in Public Administration** 3c-0l-3sh
Intensive study of the role of federal agencies and their administrators in determining and developing public policy. Public administration in practice is emphasized by utilizing case studies.

**PS377 Political Behavior** 3c-0l-3sh
**Prerequisites:** PC101, PS111
An interdisciplinary course which investigates the psychological bases of political behavior. Cross-listed in Psychology as PC377 Political Behavior.

**PS380 Soviet Politics** 3c-0l-3sh
Essential features of Communist party and government of the former U.S.S.R., including geographical and historical background and ideological and theoretical foundations. PS280 should be taken prior to this course. (Course content is in revision to reflect changing structure.)

**PS382-387 Political Systems** 3c-0l-3sh
Intensive, comparative study of the government and politics of a selected region. Suggested prerequisites: PS280 and/or 285; PS382 Africa; PS383 Asia; PS384 Middle East; PS385 Central and Eastern Europe; PS387 Latin America

**PS388 Political-Military Strategy** 3c-0l-3sh
**Prerequisites:** PS281 or PS283 or MS101-102
Deals with national security problems including decision making and budgeting, levels of strategy, the utility of force, and the impact of the military on American society.

**PS389 Developing Nations** 3c-0l-3sh
**Suggested prerequisites:** PS280 and/or 285
Political characteristics of emerging nations; impact of economic and social change upon political structure; evolving patterns of political development; and techniques of nation-building.

**PS480 Political Science Seminar** 3c-0l-3sh
Readings and written assignments on a specific topic determined by the instructor in charge.

**PS481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**PS482 Independent Study** var-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**PS493 Political Science Internship** var-2-12sh
**Prerequisites:** 9sh in Political Science with 2.0 QPA; PS111; approval of internship director and chairperson
Practical experience in government and politics. "Log" and research project required. Course grade determined by the instructor. Maximum of 6sh applied to minimum in major; maximum of 3sh applied to minimum in minor.

# PY Physics

Department of Physics
College of Natural Sciences and Mathematics

**PY101 Energy and Our Environment** 3c-0l-3sh
An overview of the areas of energy, transportation, and pollution. These topics are approached via the relevant concepts of physical science and physics. A nonlaboratory course for Liberal Studies requirements.

**PY111 Physics I Lecture** 3c-0l-3sh
Prerequisites: Elementary algebra and trigonometry
General college physics; mechanics, wave motion, and sound.

**PY112 Physics II Lecture** 3c-0l-3sh
**Prerequisite:** PY111
Electricity and magnetism, heat, light, atomic and nuclear physics, and an elementary introduction to relativity and quantum theory.

**PY121 Physics I Lab** 0c-3l-1sh
**Corequisite:** PY111
Physics laboratory at level of Physics I; exercises in mechanics, wave motion, and sound.

**PY122 Physics II Lab** 0c-3l-1sh
**Corequisite:** PY112
Physics laboratory at level of Physics II; exercises in optics, electricity and magnetism, and radioactivity.

**PY131 Physics I-C Lecture** 3c-0l-3sh
**Prerequisites:** MA121, 123, or 127, at least concurrently
A calculus-based course in general college physics; topics covered are similar to those covered in Physics 111 but are treated in more depth through the use of calculus.

**PY132 Physics II-C Lecture** 3c-0l-3sh
**Prerequisites:** MA122, 124, or 128, at least concurrently
Continuation of Physics I-C; topics covered are similar to those covered in Physics II but are treated in more depth through the use of the calculus.

**PY141 Physics I-C Lab** 0c-3l-1sh
**Corequisite:** PY131
Physics laboratory at same level as Physics I-C; exercises in mechanics, wave motion, and sound.

**PY142 Physics II-C Lab** 0c-3l-1sh
**Corequisite:** PY132
Physics laboratory at same level as Physics II-C: exercises in optics, electricity and magnetism, and radioactivity.

**PY151 Medical Physics Lecture** 3c-0l-3sh
Development of concepts and principles of physics with a strong emphasis as to their use and application in medical and other biophysical areas.

**PY161 Medical Physics Lab** 0c-3l-1sh
**Corequisite:** PY151
Experiments dealing with applications of physical principles to the field of medicine. Practical experience with use of electronic equipment, chart recorders, etc., of type found in modern-day medicine will be introduced.

**PY222 Mechanics I** 2c-0l-2sh
**Prerequisites:** PY111 or 131; MA122, 124, or 128
Dynamics of a particle in one, two, and three dimensions, central forces including planetary and satellite motion, energy in particle dynamics, statics, and systems of particles.

**PY223 Mechanics II** 2c-0l-2sh
**Prerequisites:** PY222, MA241
Mechanics of a rigid body, constraints, oscillations, wave motion, introduction to Lagrangian and Hamiltonian formulation and relativistic mechanics.

**PY231 Electronics** 3c-3l-4sh
**Prerequisites:** PY112 or 132; MA122, 124, or 128
Circuit theory, transients, transistor circuits, frequency response, input and output impedance, feedback and electronic noise. Operational amplifiers and digital electronics.

**PY242 Optics** 3c-0l-3sh
**Prerequisites:** PY112 or 132; MA122, 124, or 128
Geometrical optics and physical optics: including interference, diffraction, and polarization. Quantum optics is introduced.

**PY281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**PY299 Cooperative Education I** var-1-3sh
**Prerequisites:** PY132; completion of 30 credits with a minimum of 2.0 GPA and approval of the cooperative education coordinator
This program blends classroom theory with practical application through job-related experience. Students will work in positions offered by the participating industrial or federal/state work-study program employers under joint supervision of the Physics faculty and the on-site supervisor. A co-op student must be a full-time university student in good academic standing and be planning to return to campus for completion of his/her degree program. Evaluation requirements may include on-site visitations by the faculty/coordinator, consultation with the on-site supervisor, and a major progress report by the student or the presentation of a detailed oral report before the departmental cooperative education committee.

**PY322 Electricity and Magnetism I** 2c-0l-2sh
**Prerequisite:** PY222
Electrostatic potential theory, dielectrics, dipole theory, magnetostatics, Maxwell equations for static fields, and Legendre's polynomials and other approximation methods.

**PY323 Electricity and Magnetism II** 2c-0l-2sh
**Prerequisite:** PY322
Time-dependent form of Maxwell equations, electromagnetic induction, vector potential, magnetism, radiation fields, and Poynting vector.

**PY331 Modern Physics** 3c-0l-3sh
**Prerequisites:** PY112 or 132; MA122, 124, or 128
Introduction to particle and wave properties of matter, atomic structure, relativity, solid state and nuclear physics.

**PY342 Thermal and Statistical Physics** 3c-0l-3sh
**Prerequisites:** PY112 or 132; MA122, 124, or 128
Thermometry, laws of thermodynamics, low-temperature physics, entropy, properties of ideal gas, and an introduction to statistical mechanics.

**PY350 Intermediate Experimental Physics I** 0c-6l-3sh
**Prerequisites:** PY242 and 331
Required fundamental experiments in areas of mechanics, optics, modern physics, and heat.

**PY351 Intermediate Experimental Physics II** 0c-6l-3sh
**Prerequisite:** PY350
Increasingly sophisticated experiments in essential areas of physics. Digital computers and the Van de Graaff are available.

**PY352 Applied Physics Laboratory** 0c-6l-3sh
**Prerequisites:** PY231, 150, or permission of instructor
In this laboratory the student is introduced to much of the fundamental equipment used in industry. The student is trained in the operation and proper use of this equipment through a series of experiments that teach him/her signal detection and analysis including data acquisition by computer. The student will receive instruction on the proper methods to be used for various oral and written presentations.

**PY353 Solid State Electronics Laboratory** 0c-6l-3sh
**Prerequisite:** PY352 or permission of instructor
In this laboratory the student will encounter a number of areas of current interest in semiconductor technology. The student will perform experiments and learn skills in such areas as device process simulation, device simulation, measurements of semiconductor materials, and measurement of device parameters. The student will also be instructed in the proper presentation of written and oral reports.

**PY355 Computer Interfacing** 2c-2l-3sh
**Prerequisite:** CO110
This course is designed to teach the fundamentals of interfacing the personal computer to its physical surroundings. The students will learn how to collect data and to control experiments in real time. They will learn how to use digital to analog conversion (DAC) techniques and analog to digital conversion (ADC) techniques. They will also use a graphical software package (such as LabVIEW) to design icon based interfacing tools, to learn how to use virtual instruments and to analyze data. (Offered as PY150 Computer Applications to Physics Laboratories prior to 1997-98)

**PY399 Cooperative Education II** var-1-3sh
**Prerequisites:** PY299; PY350; completion of 80 credits with a minimum of 2.5 GPA and approval of the cooperative education coordinator
A second course in cooperative education. Includes instruction that builds upon learning experiences in college by combining and correlating them with learning experiences at the training station to meet the student's career goals. Evaluation requirements may include on-site visitations by the faculty/coordinator, consultation with the on-site supervisor, and a major progress report by the student or the presentation of a detailed oral report before the departmental cooperative education committee. No more than three semester hours of PY299, PY399, and/or PY493 may be used in fulfilling physics major course requirements.

**PY432 Advanced Electronics** 2c-3l-3sh
**Prerequisite:** PY231
Digital measurement, switching circuits, logic circuits, counting, coding, input and output, AD and DA converters, computer organization.

**PY472 Nuclear Physics** 3c-0l-3sh
**Prerequisite:** PY331
Survey of nuclear physics, nuclear size, nuclear mass, reaction theory, types of radioactive decay, nuclear models, nuclear forces, and elementary particles.

**PY473 Quantum Mechanics I** 4c-0l-4sh
**Prerequisites:** PY222 and 331
Quantum mechanics following methods of Schrodinger and Heisenberg; the theory is applied to properties of harmonic oscillator, hydrogen atom, electron in a magnetic field, and radioactive decay of alpha particles.

**PY475 Physics of Semiconductor Devices I** 3c-0l-3sh
**Prerequisites:** PY231, 242, 342, or permission of instructor
Develops the basic foundation for a study of the theory of semiconductors. Elementary quantum concepts, the band theory of solids, electrical properties of solids, effective mass theory, and principles of semiconductor devices are discussed.

**PY476 Physics of Semiconductor Devices II** 3c-0l-3sh
**Prerequisite:** PY475 or permission of instructor
Discusses the physics and operation of a number of discrete devices including: bipolar transistors, MOSFETS, JFETS, CCDs, various diode technologies, photovoltaic and photoconductive devices, solid-state lasers, and light-emitting diodes.

**PY480 Seminar** var-1sh
Speakers from within and outside the university conduct a seminar on a weekly or biweekly basis on different topics of interest in the physics community.

**PY481 Special Topics in Physics** var-1-3sh
**Prerequisite:** As appropriate to course content
Varies from semester to semester and covers diverse topics in specific areas of physics. This course number is also used to offer courses under development.

**PY482 Independent Study in Physics** var-1-6sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. Work is supervised by a physics faculty member but does not necessarily involve regular lecture or laboratory hours.

**PY490 Solid State Physics** 3c-0l-3sh
**Prerequisites:** PY223 and 331
Reciprocal lattice, crystal structure, the quantization of fields to produce quasi-particles such as phonons, magnons, excitons, Fermi gas of electrons, energy bands, semiconductor crystals, and photoconductivity.

**PY493 Internship in Physics** var-1-3sh
**Prerequisites:** PY350; completion of 90 credits with a minimum of 2.5 GPA and approval of the internship education coordinator
Supervised professional work-experience in physics and applied physics. Location, duties, internship, and hours are individually tailored to the student's career goals. A maximum of 3sh of internship in the student's major may be applied toward the physics major area elective requirements. Additional internship credit must be used as free electives. Evaluation requirements include on-site visitations by the faculty/coordinator, consultation with the on-site supervisor, and a major progress report by the student or the presentation of a detailed oral report before the departmental internship education committee.

## QB Quantitative/Business
Department of Management Information Systems and Decision Sciences
Eberly College of Business

**Note:** All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

**QB215 Business Statistics** 3c-0l-3sh
**Prerequisites:** MA121, 214
Expands upon the probabilistic concepts developed in MA214 to orient the student toward managerial decision making using quantitative methodologies. Topics covered include classical regression analysis, forecasting, Bayesian decision theory, linear programming, and simulation.

**QB281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are primarily for lower-level undergraduate students.

**QB380 Introduction to Management Science** 3c-0l-3sh
**Prerequisite:** QB215
Discussion and application of mathematical models used in managerial decision making. Linear programming, Markov processes, queuing theory, EOQ models, and simulation techniques are among the topics covered.

**QB401 Forecasting Methods for Business** 3c-0l-3sh
**Prerequisite:** QB215
This course is designed to train the students to understand the nature of forecasting problems and the techniques of forecasting methods and their business applications. Computer statistical packages are incorporated into the course so that forecasting methods and models can be applied to real-world problems, and the relationships that exist between variables can be examined.

**QB481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**QB482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## RH Rehabilitation
Department of Special Education and Clinical Services
College of Education

**RH200 Introduction to Rehabilitation** 3c-0l-3sh
A foundation for subsequent courses in the rehabilitation sequence. It is also available as a prerequisite or basic course for students interested in the rehabilitation of individuals in our society. Content includes the philosophy, history, major concepts, and current problems and issues.

**RH211 Medical Aspects of Rehabilitation** 3c-0l-3sh
Provides an overview of the etiology and pathology of a range of medical disorders which often require rehabilitative services. Emphasis is placed upon the psychosocial and functional effects of these disorders, vocational implications, and rehabilitative needs.

**RH220 Neurological Basis of Disability** 3c-0l-3sh
**Prerequisites:** EX111, RH200, BI155 or HP221
Study of the brain and spinal cord with emphasis on cortical and subcortical mechanisms instrumental in normal motion, coordination, and bodily sensation, exclusive of vision and hearing. Discussion and demonstration of conditions of cerebral palsy, poliomyelitis, traumatic paraplegics, cerebrovascular accident, Parkinson's disease, multiple sclerosis, and rehabilitative procedures.

**RH281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**RH312 Psychological Basis of Disability** 3c-0l-3sh
Study of emotional and social responses which govern behavior and relationships of handicapped individuals and rehabilitation workers alike, with emphasis on the role of disability in formation of the concept of human worth.

**RH321 Principles and Methods of Rehabilitation** 3c-0l-3sh
**Prerequisites:** RH220, 312, and permission of instructor
Delineates the roles of members of professional disciplines of medicine, psychology, prosthetics, orthodontics, audiology, speech pathology, physical and occupational therapy in restoration of the handicapped: use of diagnostic information; significance and interpretation of medical examination; role of rehabilitation counselor in the agency.

**RH322 Rehabilitation Case Study and Interpretation** 3c-0l-3sh
**Prerequisites:** RH220, 312, or permission of instructor
Purpose and techniques of case history taking; meaning and evaluation of diagnostic information; psychological evaluation in terms of mental ability, personality, attitudes, and dexterity skills; role of disabled individual's family in planning of services; referrals and report writing.

**RH360 Rehabilitation Counseling: Strategies** 3c-0l-3sh
**Prerequisites:** Permission, Rehabilitation majors only
Designed to help students develop competencies in using various counseling techniques with handicapped persons. Various theories of counseling will be explored relative to the rehabilitation setting. It will provide basic counseling skills to upperclass Rehabilitation majors prior to field training.

**RH410 Vocational Assessment in Rehabilitation Counseling** 3c-0l-3sh
**Prerequisites:** EX111, RH220, or faculty permission
Provides students with an overview of vocational assessment techniques and instruments for use with rehabilitation clients who are blind, deaf, mentally retarded, or severely physically handicapped. Includes discussion of rehabilitation evaluation.

**RH412 Occupational Aspects of Rehabilitation** 3c-0l-3sh
**Prerequisite:** RH220 or permission of instructor
The realism of the world of work and relationship of gainful employment to human autonomy and decision making. Types of jobs, levels of required skills, potential capabilities of the disabled relative to specific job responsibilities, methods of assessing potential job success, and sheltered workshops.

**RH422 Current Topics in Rehabilitation** 3c-0l-3sh
Taken concurrently with RH488 and 493
Discussion of current topics of interest in the field, such as state and federal legislation, new prosthetic advances, proposals of the National Rehabilitation Association, or recent techniques in working with specific disabilities.

**RH460 Advanced Rehabilitation Counseling** 3c-0l-3sh
**Prerequisite:** RH360
Selected counseling techniques studied and practiced under supervision. Application will be utilized in roles that will approximate the kind of clients encountered in field training.

**RH481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**RH482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**RH484 Directed Rehabilitation Activities** var-3sh
**Prerequisites:** Permission, Rehabilitation majors only
Pre-field training experience working with handicapped clients in local facilities. Concrete experience will help the students integrate classroom instruction with field experiences.

**RH488 Field Training in Rehabilitation I** var-6sh
**Prerequisites:** All major courses in program
Emphasizes development of the student rehabilitation coordinator by working with disabled clients in a public or private agency. Writing and analysis of case reports, counseling of clients, understanding of agency responsibilities and limitations, referral, follow-up, and final evaluation of the client's ability to function with various degrees of autonomy. Taken concurrently with RH493 and RH422.

**RH493 Field Training in Rehabilitation II** var-6sh
**Prerequisite:** All major courses in program
Provides a second field experience. Taken concurrently with RH488 and RH422.

## RP Regional Planning
Department of Geography and Regional Planning
College of Humanities and Social Sciences

**RP213 Cartography I** 3c-0l-3sh
Introduces students to principles of thematic map construction. Emphasis is on the techniques of choropleth mapping and the production of scientific graphs and charts. (Also offered as GE213; may not be taken for duplicate credit)

**RP281 Special Topics** 3c-01-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students. (May also be offered as GE281; may not be taken as duplicate credit under same title)

**RP313 Cartography II** 3c-01-3sh
**Prerequisite:** RP213
Gives an understanding of the compilation and use of maps and quantitative data. Develops skills essential to the construction of various types of maps. (Also offered as GE313; may not be taken for duplicate credit)

**RP314 Map and Photograph Interpretation** 3c-01-3sh
Maps and air photographs, along with remote sensing materials, permit inventory and analysis of geologic, land use, urban development, and other landscape phenomena. The understanding of these materials and associated tools for their use is presented. (Also offered as GE314; may not be taken for duplicate credit)

**RP316 Introduction to Geographic Information Systems** 3c-01-3sh
**Prerequisite:** RP213, or equivalent, or permission of instructor
Automated methods for creating, maintaining, and analyzing spatial data are presented. Topics include 1) specialized GIS hardware and software, 2) vector vs. raster vs. object-oriented spatial data structures, 3) creation and manipulation of geographic data files, 4) data base design and management concepts, 5) spatial analysis, and 6) cartographic design. (Also offered as GE316; may not be taken for duplicate credit)

**RP332 Urban Geography** 3c-01-3sh
Basic concepts of urban geography including site, situation, function, urban land use, urban structure, and urban hierarchy are introduced. Relationships between urban geography and urban planning are explored. (Also offered as GE332; may not be taken for duplicate credit)

**RP333 Trade and Transportation** 3c-01-3sh
Deals with the spatial aspects of transportation systems and their use. Circulation, accessibility, time and distance concepts, and trade patterns are discussed. (Also offered as GE333; may not be taken for duplicate credit)

**RP350 Introduction to Planning** 3c-01-3sh
Introduction to the profession and activity of contemporary American urban and regional planning. Course emphasis is placed on land use control, design, growth management, and development regulation. The legal and institutional bases of planning practice are covered as well. (Offered as GE360, Introduction to Planning prior to 1996-97)

**RP352 Planning Methods** 3c-01-3sh
**Prerequisite:** RP350
Research, analytical design, and plan-making techniques in urban and regional planning. Examines basic items necessary to prepare urban and regional comprehensive plans. (Also offered as GE352; may not be taken for duplicate credit.) (Offered as GE361, Planning: Basic Studies and Analysis prior to 1996-97)

**RP354 Planning Design** 3c-0l-3sh
**Prerequisite:** RP350
Presents concepts of city, subdivision, and transportation design in relation to topography, natural resources, and other physical elements. (Offered as GE463, Planning: Design prior to 1996-97)

**RP412 Research Seminar** 3c-01-3sh
**Prerequisite:** RP468
This senior seminar and workshop is a capstone course that focuses on recent research in the major field. Students carry out a research project on a topic of local or regional importance. (Also offered as GE412; may not be taken for duplicate credit) (Offered as GE312, Research in Geographical Planning prior to 1996-97)

**RP415 Remote Sensing** 3c-01-3sh
Deals with air photographs, satellite imagery, thermal sensing, and radar imagery and their application to deriving information about the earth's physical and cultural landscapes. (Also offered as GE415; may not be taken for duplicate credit)

**RP417 Geographic Information Systems Applications Development** 3c-01-3sh
**Prerequisite:** RP316
A project-based class in which students learn the skills to develop and maintain a Geographic Information System. Through cooperative learning students will design and implement functional systems. Methods for designing GIS systems to user specification, data collection, data input, project management, and system documentation are covered. (Also offered as GE417; may not be taken for duplicate credit)

**RP458 Land Use Law** 3c-0l-3sh
**Prerequisite:** RP350
Introduces students to principles of land use law. The course focus is on federal constitutional principles and key Supreme Court cases, especially as they relate to actions of local units of government and municipal planning practice. The course deals with the present state of land use law and with current trends and issues.

**RP464 Land Use Policy** 3c-01-3sh
**Prerequisite:** RP350
Introduces students to and provides an overview of land use issues at the regional, state, and federal levels. Emphasis is placed upon the evolution of contemporary policy strategies, constitutional issues, and regional controversies involved in the regulation of metropolitan growth, central city decline, and management of public lands. (Also offered as GE464; may not be taken for duplicate credit)

**RP468 Planning Theory** 3c-0l-3sh
**Prerequisite:** RP350, 352, 354, or permission of instructor
Seminar on contemporary debates concerning planning traditions, principles, and practices. The activity of planning is investigated from several theoretical frames and analytic positions. (Offered as GE462, Planning: Development, Principles, and Theory prior to 1996-97)

**RP481 Special Topics** 3c-01-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students. (May also be offered as GE481; may not be taken for duplicate credit under same title)

**RP482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**RP493 Internship** var-1-12sh
Professional learning experience with emphasis on application of academic background. Open to majors and minors in regional planning with a total of 57 semester hours and 15 hours in the major. See internship supervisor for additional information.

## RS Religious Studies
Department of Philosophy and Religious Studies
College of Humanities and Social Sciences

**RS100 Introduction to Religion** 3c-0l-3sh
An introduction to the academic study of religion through an examination of various dimensions of religious expression and traditions. The course will cover such areas as problems about definition of religion; approaches to the study of religion; the goals, language, and rituals of religion; cases of religious experience; faith, disbelief, and alternatives to religion; religion and the sociocultural context.

**RS110 World Religions** 3c-0l-3sh
A comparative study of the history, teaching, and rituals of the major religions of the world and their influence on contemporary society. A nonsectarian approach to religions such as Native American religion, Afro-American religion, Judaism, Christianity, and Islam in relationship to Hinduism, Buddhism, Confucianism, Taoism, and Shinto.

**RS200 Religion and Culture: Their Interaction** 3c-0l-3sh
A systematic study of the interaction of religions and various components of culture, as a way of understanding the phenomenon of religion. The approach is functional and descriptive; it uses case studies which are chronologically and culturally diverse, covering such areas as religion and politics, economics, arts, science, and literature.

**RS210 World Scriptures** 3c-0l-3sh
Major sacred writings of Hindu, Buddhist, Zoroastrian, Moslem, Confucian, Taoist, and Judeo-Christian traditions will be studied from point of view of their religious significance.

**RS250 Understanding the Bible** 3c-0l-3sh
An introduction to scholarly methods and major themes necessary to understand the Hebrew Scriptures and the New Testaments of the Judeo-Christian tradition.

**RS260 American Religious Development** 3c-0l-3sh
A survey and analysis of topics which depict the role of religion in the U.S., e.g., American Indian religion; religion and the discovery/colonization/immigration trends of the U.S.; religion and the Constitution; indigenous religious movements; black religion; ecumenism; atheism; cults; mass media and religion; religion in Indiana County.

**RS281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**RS290 Christianity** 3c-01-3sh
A study of the beliefs, practices, significant persons, history, and cultural impact of Christianity.

**RS311 Eastern Philosophy** 3c-01-3sh
An examination and critique of the philosophies which have shaped Eastern world views and ways of life as found in a representative sampling of Chinese, Japanese, and Indian thought.

**RS312 Archaeology and the Bible** 3c-0l-3sh
An investigation of religious-historical traditions of the Bible in light of archaeological research. Will include study of archaeological method and interpretation, discoveries in Egypt, Mesopotamia, and Syro-Palestine as background for understanding the traditions and religious practices and beliefs of Israel, and special questions surrounding the Patriarchal narratives, the Exodus and Conquest, Israel under David and Solomon, the Dead Sea Scrolls, and New Testament times.

**RS329 Philosophy of Religion** 3c-0l-3sh
This course is a philosophical critical examination of religion to include: the nature of religion; religious argumentation; existence and nature of God; meaning and relation of faith and knowledge; theories of origin or religion. (Offered as PH329 prior to 1995-96)

**RS360 African Religions** 3c-0l-3sh
An examination of the nature of African traditional religion and how traditional religion, Islam, and Christianity coexist and influence each other.

**RS365 Native North American Religions** 3c-0l-3sh
An introduction to the indigenous religions of North America and to the peoples who practice these rich and varied approaches to the sacred. This course not only examines major religious themes and dimensions (myth, ritual, ethics, etc.) but includes an historical perspective on North American Indian lifeways. This perspective involves discussion of the clash with Euro-American values and contemporary native religious responses to social crisis and change.

**RS370 Religions of China and Japan** 3c-0l-3sh
A study of Confucianism, Taoism, Buddhism, Shinto, and popular religion in China and Japan, including historical and theological foundations, development of thought, contemporary expressions, and encounters with the modern world.

**RS375 Religions of India** 3c-0l-3sh
A study of Hinduism, Indian Buddhism, Jainism, and Sikhism, including historical and theological foundations, development of thought, contemporary expressions, and encounters with the modern world.

**RS380 Islam** 3c-0l-3sh
A study of Islam including historical and theological foundations, developments of thought, contemporary expressions, and encounters with the modern world.

**RS410 Early Christian Thought** 3c-0l-3sh
The development of Christian thought approached through an in-depth study of selected writings from the early Church Fathers to the Protestant Reformers.

**RS440 Modern Christian Thought** 3c-0l-3sh
An examination of Christian thought, approached through in-depth study of selected writings from major theologians of the nineteenth and twentieth centuries.

**RS481 Special Topics** var-l-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**RS482 Independent Study** var-1-6sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Individual students wishing to pursue religious studies interests not covered in the department's regular offering may do so by approval. Upon approval students are guaranteed at least five hours of faculty time per credit. All programs of study must be accepted by the department as a whole. May be taken more than once to maximum of 6sh. (This option is available to both Religious Studies majors and nonmajors.)

**RS482 Independent Study: Honors** 3c-0l-3sh
**Prerequisites:** 3.00 QPA, 15sh in Religious Studies, and 3.20 average in departmental courses
Majors in Religious Studies are invited to take 3sh of independent study-designated Honors Project. Upon satisfactory completion, graduation with departmental honors is possible.

**RS493 Internship in Religious Studies** 6-12sh
**Prerequisites:** Junior or senior; Religious Studies major or double major; 2.5 QPA in major; department approval
Supervised experience in a public or private organization which extends and complements coursework in Religious Studies.

## RT Respiratory Care
Allied Health Professions Programs
College of Health and Human Services

**RT326 Respiratory Care Clinical Practice I** var-3sh
First exposure to patient care. Introduction and practice of basic respiratory care treatment modalities receive emphasis.

**RT327 Pharmacology** 3c-0l-3sh
Introduction to pharmacology and therapeutics. Emphasis placed on the drugs used in respiratory care. Drug classification, action, usage, dosage, and availability will be discussed.

**RT328 Introduction to Respiratory Care** 4c-0l-4sh
Topics include medical terminology and an overview of cellular structure and function. Emphasis is placed on neurophysiology, respiratory anatomy, and physiology.

**RT329 Respiratory Care Instrumentation** 4c-0l-4sh
Introduction to basic respiratory care equipment and related procedures. Special emphasis will be placed upon the rationale and techniques of oxygen administration.

**RT330 Cardiopulmonary Resuscitation** 2c-0l-2sh
Comprehensive analysis of the principles and practices of numerous methods of resuscitation.

**RT331 Introduction to Ventilator Management** 1c-0l-1sh
This course is designed to establish competence in changing ventilator tubing circuitry in the laboratory situation. Introductory principles, techniques, and theory of ventilator application will also be explored.

**RT333 Respiratory Care Clinical Practice II** var-4sh
Treatment procedures introduced in Clinical I are continued with greater emphasis on independence. Specialty rotations are added to broaden exposure to respiratory care and critical care.

**RT334 Respiratory Care Instrumentation and Application** 4c-0l-4sh
Provides students with a comprehensive knowledge of mechanical ventilation. The care of critically ill and physiologic consequences of mechanical ventilation will be discussed.

**RT335 Nursing Arts** 3c-0l-3sh
An overview of the history of respiratory care and nursing. Topics include medical records, infection control, sterilization, and psychosocial aspects of illness.

**RT336 Cardiopulmonary Evaluation and Clinical Correlation** 4c-0l-4sh
Disease states of the pulmonary and related systems are investigated in progression from etiology through treatment and prognosis.

**RT337 Introduction to Pulmonary Function Studies** 1c-0l-1sh
The student is introduced to the basic principles of lung volumes, capacities, and their measurement. Blood gas sampling and electrodes are also explored.

**RT426 Respiratory Care Clinical Practice III** var-5sh
Respiratory care treatment procedures are continued with emphasis on improving proficiency and refining skills. Students will make rounds with physicians.

**RT427 Applied Pulmonary Physiology** 4c-0l-4sh
Various aspects of pulmonary physiology will be discussed and applied to acid-base and blood gas analysis and interpretation.

**RT428 Essentials of Electrocardiography** 2c-0l-2sh
Designed to acquaint the student with basic principles in cardiac electro-diagnostics. Topics include the technique of ECG testing and fundamentals of ECG arrhythmia recognition.

**RT429 Design and Function of a Respiratory Care Program** 2c-0l-2sh
Basic management principles as they apply to the hospital setting; in particular, respiratory care departments and schools will be discussed.

**RT430 Pulmonary Function Studies** 2c-0l-2sh
**Prerequisite:** RT337
Principles, techniques, and equipment employed in pulmonary diagnostics are explored. Diagnostic studies include basic spirometry, flow-volume loops, diffusion studies, exercise testing, bronchoprovocation studies, and small airways diagnostics.

**RT431 Pediatric Respiratory Care** 1c-01-1sh
**Prerequisites:** RT334 and 336
The application of respiratory care to children ages six months to fifteen years is explored. Cardiopulmonary pathophysiology and treatment for the following disorders are discussed: Croup, Epiglottitis, Asthma, Cystic Fibrosis, Congenital Heart Defects, Abdominal and Chest Wall Defects.

**RT433 Respiratory Care Clinical Practice IV** var-5sh
Rotations on treatment and intensive respiratory care are continued. Advanced rotations are included.

**RT434 Neonatal Respiratory Care** 3c-0l-3sh
Basic terminology, anatomy, and pathophysiology of obstetric, fetal, neonatal, and pediatric patients will be presented.

**RT436 Respiratory Care Teaching** 2c-0l-2sh
An introduction to respiratory education.

**RT437 Methods in Critical Care** 2c-0l-2sh
Critical Care diagnostic and therapeutic modalities pertinent to respiratory care will be discussed. Topics include invasive and noninvasive cardiac monitoring, pulmonary monitoring, neurological assessment, ventilator commitment, and discontinuance.

**RT438 Cardiopulmonary Rehabilitation** 1c-0l-1sh
Techniques and principles associated with cardiopulmonary rehabilitation programs are surveyed. Topics also include the management of chronic pulmonary disease in the home and the application of respiratory equipment and mechanical ventilators in this setting.

**RT481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

## SA Safety Sciences
Department of Safety Sciences
College of Health and Human Services

**SA101 Introduction to Occupational Safety and Health** 3c-0l-3sh
Covers the theory and history of occupational hazard control, effects of hazards and failures on organizational control and productivity, safety and health legislation, and accident causation. The course also previews aspects of recognizing, evaluating, and understanding control of safety and health hazards, acquiring hazard data, and the use of hazard analytical tools. Communication techniques in safety and health management are stressed, along with the development of safety and health programs.

**SA102 Introduction to Mine Safety and Health** 3c-0l-3sh
Designed to provide the student with an in-depth background of the problems involving mine safety. An historical approach to coal and mineral mining is reviewed; legislative influences such as the Federal Coal Mine Health and Safety Act, the Metal and Nonmetal Mine Health and Safety Act, and the Occupational Safety and Health Act are discussed in depth; mining techniques, methods, and systems are discussed. Management of mine health and safety programs is presented. Federally mandated training of employees is covered. [Offered occasionally]

**SA111 Principles of Industrial Safety I** 3c-0l-3sh
**Prerequisite:** SA101
Stresses an understanding of the complexity of the industrial hazard control problem by thoroughly examining elements of safety and health enumerated in the OSHA promulgated standards and various consensus standards. Emphasis directed at plant layout and design, powered industrial vehicles, boilers and unfired pressure vessels, machine guarding, robotics safety, and an introduction to industrial processes.

**SA210 Environmental Safety and Health Regulations** 3c-0l-3sh
**Prerequisites:** CH102, SA101, or permission of instructor
This course offers the student a practical approach to the understanding of, and compliance with, the various environmental regulations that impact on business. A thorough discussion of the definitions, categories, and evaluation of hazardous materials is included. Environmental laws covered include the Clean Water Act, the Clean Air Act, the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, the Compensation and Liability Act, the Occupational Safety and Health Act, and other related laws.

**SA211 Principles of Industrial Safety II** 3c-0l-4sh
**Prerequisite:** SA111
Stresses an understanding of the complexity of the industrial hazard control problem by thoroughly examining elements of safety and health enumerated in the OSHA promulgated standards and various consensus standards. Emphasis is placed on personal protective equipment, welding and cutting, walking and working surfaces, materials handling and storage, electrical safe work practices, and construction safety. Application of hazard control strategies is accomplished in laboratory sessions.

**SA231 Principles of Mine Safety I** 3c-0l-3sh
**Prerequisite:** SA102
Focuses on the various aspects of mining operations such as slope and shaft development; mine design; ground control; hoisting; man-trips; haulage; mining equipment; mine emergency planning and procedures; mine communications and maintenance. [Offered occasionally]

**SA232 Principles of Mine Safety II** 3c-0l-3sh
**Prerequisite:** SA102
Covers surface mining operations such as slope stability, equipment, ground water, and control. Mine-related processing operations are discussed. Provides an in-depth study of the various controls of electrical hazards and ignition sources such as permissible equipment and electrical distribution systems. The uses of explosives and blasting practices, handling, storing, and transportation with emphasis on causes of explosion involving dust and gases are discussed. [Offered occasionally]

**SA245 Product Safety** 3c-0l-3sh
**Prerequisite:** MA217
Traces flow of applicable legislation dealing with consumerism and product safety. Corporate liability for product safety emphasized through case studies. Student familiarized with evolving role of Consumer Product Safety Commission. Corporate management of product development and safety detailed with emphasis on systems safety analysis, standards, and product testing.

**SA281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**SA299 Cooperative Education I** 0c-0l-0sh
**Prerequisites:** Approval of academic advisor, co-op coordinator, and department chairperson
The initial experience in a program designed to combine classroom theory with practical application through job-related experiences. The course is open to SA majors and minors usually in their sophomore year. Students are employed by organizations outside western Pennsylvania where there is an ongoing hazard control program under the direction of an experienced professional. The student is required to be in good academic standing and to serve a minimum of two alternating work experiences.

**SA301 Health Hazard Identification** 3c-0l-3sh
**Prerequisites:** CH102, PY111, MA122, BI155
Provides an understanding of the primary health hazards found in industry and their effects on the human body. Students learn to recognize hazards involved with air contaminants, noise, heat, radiation, chemicals on the skin, and other stressors. Emphasis is placed on the study of occupational disease, industrial toxicology, and use of threshold limit values.

**SA303 Control of Health Hazards** 3c-0l-3sh
**Prerequisites:** SA301, PY112, MA217
Study of engineering, administrative, and personal protective equipment as methods of reducing or eliminating hazards to the health of industrial workers. Topics covered include industrial ventilation, noise control, heat control, radiation control, personal protective equipment, and industrial health program.

**SA311 Industrial Fire Protection** 3c-0l-3sh
**Prerequisites:** CH102, PY112, SA211
Introduces fundamental concepts in protection of industrial workers and property from fire and explosion. Fire chemistry, control of ignition sources in industry, and properties of combustible materials are discussed. Fire detection and extinguishment are covered along with building construction for fire prevention, life safety, fire codes, and related topics.

**SA345 Systems Safety Analysis** 2c-3l-3sh
**Prerequisites:** SA211, MA217
Focuses on the evaluation of system designs using detailed system analysis techniques. Topics covered include system definition, economics of systems safety, systems safety methodology, mathematics of systems analysis including statistical methods, Boolean Algebra, and reliability. Skills gained include the ability to perform preliminary hazard analysis, failure mode and effect analysis, fault tree analysis, and exercises in the application of fault tree analysis to hardware and man/machine systems. Practical analysis work is accomplished in laboratory sessions.

**SA347 Ergonomics** 2c-3l-3sh
**Prerequisites:** SA301, BI155
An exploration of the principles which control human performance and its effect upon the safety and reliability of systems. Engineering anthropometry, human perception, biomechanics of motion and work posture, work physiology and human performance measurement are covered in the context of their application in workplace design. Students will be instructed in methodologies for analysis of tasks and human performance requirements. Important human limitations and ergonomic hazard evaluations, such as lifting and repetitive motion tasks, are studied in laboratory sessions.

**SA370 Fleet Safety** 3c-0l-3sh
**Prerequisites:** SA101, junior standing
Includes topics involved with the development and operation of motor fleet safety programs: driver selection and training, accident investigation and recordkeeping, equipment safety features, preventive maintenance, and driver incentive programs.

**SA380 Institutional Safety Management** 3c-0l-3sh
**Prerequisite:** Junior standing
Historical aspects of safety for both private and public institutions; introduction to trends in liability and institutional safety regulations. Distinctions will be made between employee, visitor, and patient hazards and their control.

**SA399 Cooperative Education II** 0c-0l-0sh
**Prerequisite:** SA299
A second experience in a program designed to combine classroom theory with practical application through job-related experiences. The course is open to SA majors and minors usually in their junior or senior year. Students are employed by organizations outside western Pennsylvania where there is an ongoing hazard control program under the direction of an experienced safety professional. The student is required to be in good academic standing and to serve a minimum of two alternating work experiences.

**SA401 Mine Ventilation** 2c-3l-3sh
**Prerequisites:** PY112, SA102, MA122, or consent
Study of mine ventilation principles and practices which provide a basic knowledge in design and operation of mine ventilation systems. The topics of airflow physics, ventilation standards, fan fundamentals, pressure losses, required air flows, and overall design are discussed. Specific problems in mine ventilation will be solved. [Offered occasionally]

**SA402 Health Hazard Evaluation** 2c-3l-3sh
**Prerequisites:** SA301, PY112, MA217
A lecture/laboratory course which provides a basic understanding of techniques used in measuring and evaluating the magnitude of health hazards in industry. Laboratory sessions provide experience in air sampling, noise measurement, heat measurement, particle size analysis, chemical analysis, and evaluation of industrial ventilation systems.

**SA412 Evaluation of Safety Program Effectiveness** 3c-0l-4sh
**Prerequisites:** MA217, MG311, junior standing
Teaches various safety management techniques to identify and prevent the occurrence of hazardous behavior and conditions. Devises methods capable of extracting accurate, meaningful data, methods of collecting, codifying, and processing hazard and loss incident information, and utilizing data retrieval systems to be used in cost/benefit decision-making for hazard prevention, safety program and performance evaluation, and risk management.

**SA441 Accident Investigation** 3c-0l-3sh
**Prerequisites:** SA101, junior standing or consent
Focuses on various aspects of accident investigation such as recent theories associated with accident causes, investigative techniques, data acquisition, structure of investigative reports, management responsibilities, and remedial actions. Particular emphasis on determining sequence of events to develop management actions which will prevent recurrence of accidents.

**SA461 Air Pollution** 3c-0l-3sh
**Prerequisite:** SA301 or consent
Focuses on various major aspects of the air pollution problem. Includes sources of pollution, evaluation and engineering of pollutants, government regulations, atmospheric chemistry and dispersion, and human and nonhuman effects. Particular emphasis on information that is practical for the safety management, industrial health, or environmental health professional.

**SA462 Radiological Health** 3c-0l-3sh
**Prerequisite:** SA301 or consent
Study of problems associated with ionizing radiation in human environment. Emphasis given to biological effects, radiation measurement, dose computational techniques, exposure control, and local and federal regulations. Study and use of various radiological instruments included.

**SA472 Process Safety in the Chemical Industry** 3c-0l-3sh
**Prerequisites:** SA301, 311, 345, and senior standing, or permission of instructor
This course is designed to cover all important aspects of loss prevention as it is practiced in the chemical process industries. Its objective is to prepare the safety professional so that he/she may be able to work more effectively with chemists and chemical engineers in joint hazard identification, evaluation, and control projects.

**SA481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**SA482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**SA488 Internship** 12sh
**Prerequisites:** Senior standing, all required courses in major, minimum of 2.8 overall and 3.0 GPA in major, and consent
This course is a practicum conducted at an approved occupational setting up to 500 miles away from IUP. Students are required to conduct four major projects over the course of the summer. One project will be from each of the following areas: Safety Management, Industrial Safety, Industrial Hygiene, and Fire Protection. Students are accountable to an on-site supervisor and are required to remain in close contact with a Safety Sciences faculty coordinator. Offered in summer only.

**SA493 Internship** var-6sh
**Prerequisite:** Senior standing, all required courses in major
All Safety Sciences majors are expected to take this course. It is conducted away from the university at various industrial enterprises. Students are required to provide their own transportation. Intended to allow the student to apply hazard assessment and safety management practices to actual industrial situations while at same time being exposed to complexities of industrial environment.

## SC Science
College of Natural Sciences and Mathematics

**SC101 Fundamentals of Physics** 2c-21-2.5sh
**Prerequisite:** Elementary Education major or instructor permission
A conceptual course in physics for Elementary Education majors. High school physics is not a prerequisite. Class and lab presentations concentrate upon dispelling naive concepts and developing a better understanding and appreciation of the physical world. The topics of motion, heat, light, sound, electricity, magnetism, and the nucleus are presented in context with our everyday experiences. This course does not fulfill the Liberal Studies requirement except for majors in Elementary and Early Childhood Education.

**SC102 Fundamentals of Chemistry** 2c-21-2.5sh
**Prerequisite:** Elementary Education major or instructor permission
A survey of chemical principles and concepts. The nature of chemical reactions as applied to technology and its applications to society. The world of consumer chemistry will be explored. The goal is to develop a chemical literacy for the student. A series of laboratory exercises develops concept understanding and process skills. Some individual and group projects will be included. This course does not fulfill the Liberal Studies requirement except for majors in Elementary and Early Childhood Education.

**SC103 Fundamentals of Earth and Space Science** 2c-21-2.5sh
**Prerequisites:** SC101, 102
Introduction to geology, astronomy, oceanography, and meteorology for Elementary Education majors. Emphasis is placed on the understanding of large-scale processes and how the earth, solar system, and universe work. Lab experiences include hands-on work with earth materials and with instruments from all of our subjects, map, and field trips which may occur during class times, nights, and weekends. This class does not fulfill the Liberal Studies requirement except for majors in Elementary and Early Childhood Education.

**SC104 Fundamentals of Environmental Biology** 2c-21-2.5sh
**Prerequisites:** SC101, 102
A basic introduction to the major concepts and principles of ecology and their application to modern living for majors in Elementary and Early Childhood Education.

**SC105 Physical Science I** 3c-2l-4sh
A descriptive and conceptual course in physics for the non-Science major. High school physics is not a prerequisite. Course content is designed to develop an understanding and appreciation of the physical world around us, to produce changes in attitude and background essential for our modern society, and to clarify the following topics: motion, heat, sound, light, electricity, magnetism, and the structure of matter.

**SC106 Physical Science II** 3c-2l-4sh
A basic course in environmental and consumer chemistry for the non-Science major. High school chemistry is not a prerequisite. Major topics include humankind's use and abuse of soil, water, air and energy resources, global food production and hunger, the nuclear industry, and the threat of nuclear war. Consumer topics include vitamins and nutrition, food additives, pesticides, and drugs.

**SC281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**SC481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**SC482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## SH Speech Pathology and Audiology (formerly Speech and Hearing)
Department of Special Education and Clinical Services
College of Education

**SH111 Introduction to Communication Disorders** 3c-0l-3sh
Introduction to study of physiological, acoustical, and scientific processes involved in production and reception of speech. The genetic development of speech sounds and factors that hinder or facilitate speech and language acquisition. (Previous title: Fundamentals of Speech and Hearing)

**SH122 Clinical Phonology** 3c-0l-3sh
Detailed study of the classification of American-English phonemes using the physical and acoustical perspectives. Development of proficiency in use of International Phonetic Alphabet for allophonic transcriptions of normal and disordered speech. (Previous title: Phonetics)

**SH222 Introduction to Audiology** 3c-0l-3sh
The study of auditory function, anatomy of auditory mechanism, psychophysics of sound, types and causes of hearing loss, measurement of hearing, and educational considerations for hearing-handicapped child.

**SH242 Speech Science I** 3c-0l-3sh
Study of the communication process with emphasis on physical characteristics of sound production, transmission and perception of the sound, and the evolvement and use of symbols for meaningful communication. The scientific principles of normal oral communication are stressed, and language learning is recognized as a basis for oral communication. (Previous title: Introduction to Speech Science)

**SH251 Anatomy and Physiology of the Speech and Hearing Mechanism** 3c-0l-3sh
Consideration of genetic development, structure, and function of the organs of speech and hearing. Anatomical systems involved in respiration, phonation, articulation, and hearing and relationships between systems in production and reception of speech.

**SH254 Classroom Management of Language Disorders** 3c-0l-3sh
Study of aspects of speech, language, and hearing problems pertaining to classroom situation. Types of speech and hearing disorders, conducting speech and language improvement lessons, classroom aids for teaching the child with language, speech, and hearing impairment, and school and community resources for these children. (Required for majors in Education of the Exceptional and suggested for majors in Elementary Education)

**SH281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**SH311 Aural Rehabilitation** 3c-0l-3sh
**Prerequisite:** SH222, 2.5 QPA
Consideration of the effects of varied degrees of hearing loss sustained by individuals at different stages of development and study of total education and rehabilitative procedures for the hard-of-hearing child or adult.

**SH334 Language Development** 3c-0l-3sh
**Prerequisite:** 2.5 QPA
Study of the development of an interpersonal communication system; language as a system of symbols for communication; the structure of the English language, including phonology, syntax, and semantics with emphasis on the generative evolvement of sentences. Highlighting the neurological, social, and psychological bases of language development. (Offered as SH234 prior to 1993-94)

**SH342 Speech Science II** 3c-0l-3sh
**Prerequisite:** SH242, 2.5 QPA
Physiologic, acoustic, and perceptual characteristics of speech with special emphasis on speech monitoring and controls. Major lab instrumentation and research techniques in current use are described and demonstrated. Status of present knowledge is summarized and discussed.

**SH406 Articulation and Language Disorders** 3c-0l-3sh
**Prerequisites:** SH111, 242, 251, 334, 2.5 QPA
Exploration of the processes related to developmental articulation and language disorders from birth through adolescence. Instruction in the principles underlying modification of these disorders. Preparation of management programs and observation in the Speech and Hearing Clinic required. (Offered as SH306 prior to 1993-94)

**SH408 Stuttering and Voice Disorders** 3c-0l-3sh
**Prerequisites:** SH111, 242, 251, 334, 2.5 QPA
Introduction to the developmental, psychogenic, and organic bases for stuttering and voice disorders. Instruction in principles underlying treatment of these disorders with emphasis on anatomical deviations and laryngeal dysfunction. Preparation of management plans and observation in Speech and Hearing Clinic required. (Offered as SH308 prior to 1993-94)

**SH412 Organization and Administration of Speech and Hearing Program** 3c-0l-3sh
**Prerequisite:** SH111, 2.5 QPA (meets requirement for Professional Education course)
Establishment and maintenance of speech and hearing programs within various administrative organizations, particularly in the public schools. Techniques of client identification, scheduling, recordkeeping, appropriate referral, material and equipment selection, teacher and parental counseling, and the development of coordinated professional and interdisciplinary procedures. (Offered as SH312 prior to 1993-94)

**SH420 Speech Clinic** var-1-3sh
**Prerequisites:** ED242, 342, QPA of 3.0+, all major courses, program director's permission
Experience in working with individuals or groups of persons who exhibit speech or hearing problems. Lesson planning, writing of reports, and case histories of a detailed nature. (Offered as SH320 prior to 1993-94)

**SH481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**SH482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member.

## Sociology
Department of Sociology
College of Humanities and Social Sciences

**SO151 Principles of Sociology** 3c-0l-3sh
Scientific study of structure and functioning of human societies, with special attention to factors responsible for the organization and transformation of sociocultural systems. Specific course content varies from one instructor to another.

**SO231 Contemporary Social Problems** 3c-0l-3sh
Exploration of some pressing problems currently endemic to Western society. Problems are defined and solutions explored in light of historical, political, economic, social, and anthropological data.

**SO233 Language and Culture** 3c-0l-3sh
Focuses on social and cultural functions of language. Particular emphasis on analysis of non-Western languages. (Previous title: Cultural Symbolism: Language in Culture and Society)

**SO251 Sociology of Human Sexuality** 3c-0l-3sh
In-depth analysis of a formerly taboo topic, human sexuality. Current information from biological, psychological, and sociological research on human relationships is presented to provide a foundation for self-understanding and societal values.

**SO271 Cultural Area Studies: Africa** 3c-0l-3sh
Explores the cultural diversity of the continent of Africa. The first unit examines the historical processes which shape modern society, including the formation of indigenous African empires, the evidence for trade routes, slave trading, and colonialism. The second unit examines the nature of African traditional societies, including analyses of forager and agricultural groups. The last unit covers issues of contemporary development in Africa such as famine and agricultural policy, the status of women in economic development, and apartheid. Reading includes ethnographic and historical accounts of African society as well as selections by African writers on the issues of contemporary society. (Also offered as AN271; may not be taken for duplicate credit)

**SO272 Cultural Area Studies: China** 3c-0l-3sh
Designed to assist the student in developing an understanding of contemporary China. While the course will begin with prehistoric and historic aspects of China, the focus will be on contemporary issues presented in the context of sociological theory. Specific Chinese cultural components that will be investigated include values, attitudes, norms, social organization, linguistics, and folklore. (Also offered as AN272; may not be taken for duplicate credit)

**SO273 Cultural Area Studies: Southeast Asia** 3c-0l-3sh
An introduction to the peoples and cultures of Southeast Asia. Prehistory and the development of indigenous states in Southeast Asia and analysis of impact of world religions, such as Islam, and Western colonialism. Also examines modern hunter-gatherer and farming societies and discusses contemporary issues in social and economic change, including the "Green Revolution," tropical deforestation, the struggle of ethnic minority tribal peoples, and the plight of Indochinese refugees. (Also offered as AN273; may not be taken for duplicate credit)

**SO274 Cultural Area Studies: Latin America** 3c-0l-3sh
An introduction to the peoples and cultures of Latin America. Focuses on the prehistory and development of pre-Columbian complex societies in Mesoamerica and the Andes and analyzes the impact of European colonialism on these major regions. Also examines contemporary issues, such as civil wars, economic development, rural-urban migrations, and migration and immigration of Latin American peoples into the United States. (Also offered as AN274; may not be taken for duplicate credit)

**SO281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**SO286 Marriage, Kinship, and the Family** 3c-0l-3sh
Sociological and anthropological study of patterns of marriage, kinship, and family life, with emphasis on the relationship between family patterns and other social institutions. Topics covered include the family and marriage in historical and comparative perspective; worldwide patterns of gender stratification; incest and incest avoidance; class and race contexts of family patterns; mate selection and love; parenthood and child rearing; domestic and sexual violence; alternative family lifestyles; and the current crisis and possible future of the family. Intended for a broad audience but also open to sociology and anthropology majors and minors. (Also offered as AN286; may not be taken for duplicate credit)

**SO301 Clinical Sociological Theory** 3c-0l-3sh
**Prerequisite:** SO151
Develops an understanding of how to use micro and macro sociological theory to analyze, assess, and diagnose human problems. Employing case studies, prepares students to do casework and help solve interpersonal, group, and organizational problems. Also seeks to acquaint students with the broader professional activity of human services.

**SO302 Clinical Sociological Practice** 3c-0l-3sh
**Prerequisite:** SO301
Prepares the student to effect constructive change within individuals, groups, families, and communities. Draws its analysis, diagnosis, and methods from the foundations of sociological theory at the level of intervention with clients.

**SO303 Social and Cultural Change** 3c-0l-3sh
**Prerequisite:** SO151
Exploration of current theoretical perspectives on social and cultural change. Special attention given to planned change at the local or regional level.

**SO314 Native Americans** 3c-0l-3sh
Survey of culture history and culture area characteristics of Indians of North America. Detailed study of representative groups related to historical, functional, and ecological concepts. (Previous title: Ethnology of North American Indians)

**SO320 Sociological Theory** 3c-0l-3sh
**Prerequisites:** SO151 and second-semester sophomore standing
Detailed survey of the historical development of sociological theory from the mid-nineteenth century to the present. Treats the classical theorists Marx, Durkheim, and Weber, and such contemporary theoretical schools as functionalism, Marxian and Weberian conflict theory, cultural materialism, social evolutionism, rational choice theory, symbolic interactionism, ethnomethodology, sociobiology, structuralism, and postmodernism. Students are encouraged to take this course in the second semester of their sophomore year or during their junior year.

**SO333 Delinquency and Youth** 3c-0l-3sh
**Prerequisite:** SO151
Study of social and cultural factors involved in various youth lifestyles, including delinquency. Cross-cultural and historical approach used in a review of social norms, social control, and socialization institutions and community-based programs for rehabilitation.

**SO335 Alcohol and Drug Abuse** 3c-0l-3sh
**Prerequisite:** SO151
Examines the social issues and problems of alcohol and drug misuse in American society. Legal and illegal substances will be considered, and the causes of substance abuse as well as alternatives will be examined.

**SO336 Sociology of the Family** 3c-0l-3sh
**Prerequisite:** SO151
Sociological study of the family from various theoretical viewpoints. Special emphasis will be placed on the contemporary American family. A variety of topics will be covered such as mate selection, power relationships and roles in the family, parent-child interaction, marital satisfaction, divorce, and others.

**SO337 World Societies and World Systems** 3c-0l-3sh
**Prerequisite:** One of the following: AN110, EC101 or 121, GE230, HI202, PS101 or 282, SO151
Detailed analysis of the evolution of human societies, with special emphasis on the modern world system of societies that began to emerge in the sixteenth century and that has since expanded to include the entire globe. Topics include societies during the preindustrial era; the emergence of modern capitalism in the sixteenth century; relations between developed and less-developed societies in the modern world; the ascent and decline of nation-states in the modern world; the current plight of the Third World; the rise and demise of socialism in the twentieth century; and various scenarios for the human future.

**SO340 Sociology of Industry** 3c-0l-3sh
**Prerequisite:** SO151
Examination of industrial organizations and their environments. Production systems analyzed in terms of different forms of organization, e.g., bureaucratic, power-equilibrium, and worker-participation. Special attention paid to who defines production, how such definitions are legitimized, and how constraints are placed on such definitions by union and other political organizations.

**SO341 Sociology of Education** 3c-0l-3sh
**Prerequisite:** SO151
Examines the place of education in society. Special attention to the development of education in America and its relation to political and economic phenomena. Some attention given to education in other industrial and agrarian societies.

**SO342 Social and Cultural Aspects of Health and Medicine** 3c-0l-3sh
**Prerequisite:** 6sh in Sociology or Anthropology
Review of the fields of medical sociology and anthropology. Focuses on such topics as health and illness in cross-cultural context, aging, social and psychological aspects of pain, and social organization of health facilities and services. Definitions of limits of "life" and "death" in context of holistic health.

**SO345 Interpersonal Dynamics** 3c-0l-3sh
**Prerequisite:** SO151
Study of the interaction between and among individuals and groups in various social settings. Emphasis on self-understanding, small groups, socialization, social influence and compliance, person perception, collective behavior, and mass communication.

**SO348 Sociology of Work** 3c-0l-3sh
**Prerequisite:** SO151
Focuses upon the sociological examination of the various forms of labor, employment, and unemployment present in industrial societies. Examines the nature of work and unemployment in the modern era and how these forms are being transformed in the present period.

**SO352 Sociology of Religion** 3c-0l-3sh
**Prerequisite:** SO151
Nature, role, and function of religious phenomena in human societies will be explored with special attention to certain critical issues as they relate to religion and politics and religion and economics. Some fundamental modes of religious life including ritual forms and mythic expressions will be examined. Other themes such as revitalization movements and processes of secularization in modern societies will be included.

**SO357 Sociology of Aging** 3c-0l-3sh
**Prerequisite:** SO151
Introduction to various problems faced in the process of growing older. Attitudes of society toward elderly and social and cultural impact of an aging U.S. population examined.

**SO361 Social Stratification** 3c-0l-3sh
**Prerequisite:** SO151
Examines leading perspectives in the major sociological subfield of social stratification. Attention drawn to different ways of ranking people in human societies, issues concerning the distribution of income and wealth, the role of political power in determining who gets what, and the causes and consequences of social inequality for specific groups. (Offered as SO435 prior to 1993-94)

**SO362 Racial and Ethnic Minorities** 3c-0l-3sh
**Prerequisite:** SO151
Examines from an historical and comparative perspective the experiences of minority groups, with special emphasis on economic and political domination, stereotyping, prejudice, and discrimination. Techniques of majority group domination and the responses of minority groups are discussed. Various reasons for the different rates and patterns of assimilation are explored.

**SO363 Sociology of Sex and Gender** 3c-0l-3sh
**Prerequisite:** SO151
Explores current perspectives on the situations faced by women and men, primarily in the United States. Examines issues such as the impact of sex and gender on socialization, the construction of knowledge, intimate relationships, paid work, family relationships, health, and issues of change. (Offered as SO354 prior to 1993-94)

**SO380 Social Research Methods** 3c-0l-3sh
**Prerequisites:** 9sh in sociology and junior standing
Examines diverse research designs used in the social sciences, i.e., survey, field study, experiment, documentary, and existing statistical data. Focuses both on logic and practice of social research. Students choose a number of mini-projects or a major research project. (Offered as SO455 prior to 1993-94)

**SO421 Sociology of Mass Media** 3c-0l-3sh
**Prerequisite:** SO151
Examines the development of mass media as dominant cultural forms within advanced industrial societies in the twentieth century. Emphasizes critical understanding of the sociohistorical development, the underlying assumptions, and the social implications of the advance of mass media.

**SO427 Spouse Abuse** 3c-0l-3sh
**Prerequisite:** SO151
Considers the range of theoretical explanations for the pervasive violence between husband and wife. Particularly examines the research on wife battering and the implications of this research for programs and policies assisting both the victim and the abuser.

**SO428 Child Abuse** 3c-0l-3sh
**Prerequisite:** SO151
Examines the prevalence, causes, and social implications of physical, sexual, emotional, and neglect forms of child abuse in society. Child abuse will be studied from the individual, family, and societal level perspectives. Potential intervention strategies will also be considered.

**SO447 Modern Sociological Theory** 3c-0l-3sh
**Prerequisites:** 9sh in sociology and junior standing
Detailed examination of major theoretical issues, perspectives, and controversies occupying center stage in contemporary sociological analysis. Major attention to nature and logic of social theorizing, primary macro-level theoretical perspectives which compete for attention in contemporary sociology, and the nature of new directions currently being taken within sociological theory.

**SO448 Social Policy** 3c-0l-3sh
**Prerequisite:** SO151
Focuses on the formation of social welfare programs in the U.S., current social policy issues, and debates between conservative, liberal, and social democratic policy analysts. Special attention drawn to various social problems and a range of social policies designed to ameliorate the economic disadvantages of single individuals, single parents, and two-parent families. Also devoted to understanding the relationship between social policy, research, and implementation.

**SO456 Field Research Methods** 3c-0l-3sh
**Prerequisite:** SO455 or permission
Examination of methods and practice of sociology and anthropology in the areas of qualitative and field methods. Concentrates upon the development of field notes, interviewing techniques, participant observation, etc. Qualitative methods of sampling and analysis will include theoretical sampling and analytic induction. Brief background research into community, organizational, and group structure will also be emphasized.

**SO457 Computer Use in Sociology** 3c-0l-3sh
**Prerequisite:** Permission of the instructor
Introduces students to use of microcomputers in social science research and practice. Uses a variety of software for clinical sociological applications as well as quantitative analysis of social scientific data. These include client information systems, field notes and downloading such notes, exchanging information between agencies, and statistical analyses for program evaluation and forecasting.

**SO458 Political Sociology** 3c-0l-3sh
**Prerequisite:** SO151
Examination of the social context of power and politics, with special reference to such topics as who controls the state and state policy; the role of the state in stabilizing capitalism and protecting the power of the upper class; political activities of the middle and upper classes; and labor, civil rights, and welfare rights social movements in America. Especially considers the problems of conducting and implementing social policy research for social change. Cross-listed in Political Science as PS346: Political Sociology.

**SO459 Development of Social Services** 3c-0l-3sh
**Prerequisite:** Permission of the instructor
Examination of ideological and institutional conditions which shape health, unemployment, social security, and welfare services.

**SO480 Sociology Seminar** var-1-3sh
**Prerequisite:** SO151
Seminar for advanced students devoted to an intensive analysis of specialized issues within the discipline.

**SO481 Special Topics** var-l-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**SO482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
An opportunity for students to engage in an in-depth analysis of some topic through consultation with a faculty member. A semester project ordinarily expected. Approval is based on academic appropriateness and availability of resources.

**SO483 Readings in Sociology** var-1-3sh
**Prerequisite:** SO151
Directed readings on special topics in sociology.

**SO493 Internship in Sociology** var-3-12sh
**Prerequisite:** Permission of the instructor
Supervised experience in public or private organizations that extends and complements coursework at the university.

## Spanish
Department of Spanish and Classical Languages
College of Humanities and Social Sciences

**SP101 Elementary Spanish I** 4c-0l-4sh
For beginning students. Primary emphasis is on aural/oral skills. Students will learn to converse and ask questions in simple present time and become acquainted with location of Hispanic populations and elements of their daily lives. Attendance is required.

**SP102 Elementary Spanish II** 4c-0l-4sh
A continuation of SP101. Students will learn to express past and future time. They will continue to learn about Hispanic countries and their cultures. Attendance is required.

**SP121 Spanish for Health Care Professionals I** 3c-0l-3sh
For beginning students in nursing and other health-related programs. Primary emphasis is on aural/oral skills. Students will learn to converse and ask questions related to health care settings in simple present time and near future. They will also become acquainted with Hispanic populations and elements of their daily lives. Class and language lab attendance are required. A student may receive credit for only one course from SP101, 111, 121, or 131.

**SP122 Spanish for Health Care Professionals II** 3c-0l-3sh
**Prerequisite:** SP121 or equivalent
A continuation of SP121 for students in nursing and other health-related programs. Primary emphasis is on aural/oral skills. Students will learn to express past and future time in health care settings. They will read articles about medical issues and short stories which concern health care themes in Hispanic cultures. Class and language lab attendance are required. A student may receive credit for only one course from SP102, 211, 122, or 132.

**SP131 Spanish for the Hospitality Industry I** 3c-0l-3sh
Similar to SP101 but with a special emphasis on the vocabulary and structures used in the hospitality industry: hotel and restaurant management, tourism, and marketing. Class and language lab attendance is required. A student may receive credit for only one course from SP101, 111, 121, or 131.

**SP132 Spanish for the Hospitality Industry II** 3c-0l-3sh
**Prerequisite:** SP131 or equivalent
Similar to SP102 but with a special emphasis on the vocabulary and structures used in the hospitality industry: hotel and restaurant management, tourism, and marketing. Class and language lab attendance is required. A student may receive credit for only one course from SP102, 211, 122, or 132.

**SP201 Intermediate Spanish** 4c-0l-4sh
**Prerequisite:** SP102 or equivalent
A continuation of previous work on listening, speaking, reading, and writing skills. Students will learn to function in everyday situations, expressing opinions and doubts, and narrating and describing in present, past, and future time. Exposure to cultural concepts through literary readings. Liberal Studies credit is given.

**SP221 Intermediate Spanish Conversation** 3c-0l-3sh
**Prerequisite:** SP201 or equivalent
Intensive work on oral communication skills with emphasis on vocabulary building, pronunciation, and discourse strategies. Required for all majors and minors.

**SP222 Intermediate Spanish Conversation-Business** 3c-0l-3sh
**Prerequisite:** SP201 or equivalent
Same as SP221 but with a special emphasis on the vocabulary and structures used in the business world. Substitutes for SP221.

**SP223 Intermediate Spanish Conversation-Criminology** 3c-0l-3sh
**Prerequisite:** SP201 or equivalent
Same as SP221 but with a special emphasis on the vocabulary and structures used in law enforcement and criminal justice. Substitutes for SP221.

**SP230 Intermediate Spanish Composition** 3c-0l-3sh
**Prerequisite:** SP221 or concurrent registration
Intensive practice in written expression in Spanish. Both communicative and structural skills are stressed. Taught in Spanish. Required for all majors and minors. This course is approved to meet the Liberal Studies requirement for a writing-intensive course for majors.

**SP244 Modern Mexico** 3c-0l-3sh
**Prerequisite:** SP201 or equivalent and participation in the Mexico Summer Study Abroad Program
This course, taught in Mexico as part of the study abroad program, introduces students to the contemporary culture of the largest Spanish-speaking country in the world. A historical perspective is provided within which to understand current phenomena. Textbook readings are supplemented with readings from literary works and current periodicals. Students will gain firsthand experience both through field trips and by living with a Mexican family. Taught in Spanish.

**SP260 Introduction to Hispanic Literature** 3c-0l-3sh
**Prerequisite:** SP230 or equivalent
This course is a prerequisite for any 300- or 400-level course in Hispanic literatures. Designed to provide students with the tools necessary for developing literary competence, the course combines a study of literary genres and analysis with an introduction to the literatures of Spain and Spanish America. Taught in Spanish. Required for all majors and minors.

**SP281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**SP290 Spanish for Elementary Teaching** 3c-0l-3sh
**Prerequisite:** SP201 or equivalent oral proficiency rating. For students enrolled in the FLISET Program
This course is designed for elementary education/early childhood majors who are completing the FLISET Program. The purpose of the course is to increase the students' proficiency in Spanish and to prepare them for an internship in an elementary school abroad. Emphasis is placed on vocabulary acquisition and on strengthening of listening and speaking abilities in Spanish. Through in-class interaction and practice in the language laboratory, students improve their linguistic skills, learn the language necessary for dealing with elementary-age children, and acquire basic vocabulary for teaching the content areas of the elementary school curriculum.

**SP321 Advanced Spanish Conversation** 3c-0l-3sh
**Prerequisite:** SP230 or equivalent
Extensive practice in oral communication skills. Emphasis is placed on developing fluency in speaking over a wide range of topic areas. Required for all majors and minors.

**SP340 Hispanic Civilization Through the Nineteenth Century** 3c-0l-3sh
**Prerequisite:** SP230 or equivalent
An introduction to the significant aspects of the culture of both Spain and Spanish America. Elements for explanation and discussion are drawn from artistic, literary, religious, geographic, social, and political manifestations of Hispanic culture as these have revealed themselves through the nineteenth century. Taught in Spanish. Required for all majors and minors.

**SP342 Twentieth-Century Spanish Civilization and Culture** 3c-01-3sh
**Prerequisite:** SP230 or equivalent
An analysis of the major cultural trends in twentieth-century Spain as they relate to its current problems, aspirations, and values. Elements for explanation and discussion are drawn from artistic, literary, religious, geographic, social, and political manifestations. Taught in Spanish; offered alternate years. (May not duplicate credit for SP382 taken in Valladolid)

**SP344 Twentieth-Century Spanish-American Civilization and Culture** 3c-0l-3sh
**Prerequisite:** SP230 or equivalent
An analysis of the major cultural trends in twentieth-century Spanish America as they relate to its position in the world. Elements for explanation and discussion are drawn from artistic, literary, religious, geographic, social, and political manifestations, including indigenous cultural influences. Taught in Spanish; offered alternate years.

**SP353 Spanish Phonetics and Phonemics** 3c-0l-3sh
An introduction to the phonological study of the sounds and training in pronunciation. The student will learn the theoretical basis for understanding the Spanish sound system and will perfect pronunciation through classroom practice and tapings. The course is taught in Spanish. Required for Spanish Education majors; highly suggested for Spanish majors.

**SP354 Commercial Spanish** 3c-0l-3sh
**Prerequisite:** SP230 or equivalent
Designed especially for majors in Spanish for International Trade, this course has three focuses: it teaches students how to do business communications in Spanish; it teaches the vocabulary necessary for dealing with all aspects of trade and commerce; and it introduces students to the special concerns and practices of business in the Spanish-speaking world. Taught in Spanish.

**SP362 Survey of Peninsular Literature** 3c-0l-3sh
**Prerequisite:** SP260 or permission
A course designed to introduce students to a careful and critical reading of literary texts from Spain read either in their entirety or in select passages. Taught in Spanish; offered alternate years.

**SP382-389 Pennsylvania-Valladolid Program** 18sh
**Prerequisites:** SP230 and 260 or permission
Contact chairperson, Department of Spanish and Classical Languages. Courses taken in Valladolid include the following and SP482: Independent Study (3sh). Descriptions below.

**SP382 Contemporary Spain** 3sh
**Prerequisites:** SP230 and 260 or permission
Gives the student a general view of Spain today in the areas of society, economy, and political institutions. (See SP342)

**SP383 Geography and History of Spain** 3sh
**Prerequisites:** SP230 and 260 or permission
Students will be introduced to a panorama of Spanish physical, social, and economic geography including the recent autonomic division of the country and the communication among the autonomies. Students will also review the history of Spain from the fifteenth century to the present with special emphasis on today's Spanish institutions.

**SP384 History of Spanish Art** 3sh
**Prerequisites:** SP230 and 260 or permission
Students will be exposed to the richness of art in the Iberian Peninsula and in particular in the area of Madrid and Castilla-Leon. They will study the evolution of Spanish art in history, giving more emphasis to contemporary tendencies.

**SP385 Survey of Spanish Literature** 3sh
**Prerequisites:** SP230 and 260 or permission
Students will be introduced to a general study of Spanish literature from its origin to the present time. Students will learn to appreciate and analyze the different literary genres. Emphasis will be placed on twentieth-century literature.

**SP389 Theory and Practice of Spanish Language** 3sh
**Prerequisites:** SP230 and 260 or permission
Students will be introduced to Spanish syntax, morphology, and the Spanish language lexicon. They will be introduced to familiar and formal conversation and to idiomatic expressions used in everyday situations.

**SP390 Teaching of Elementary Content Through the Spanish Language** 3c-0l-3sh
**Prerequisites:** Passage of a language proficiency examination and permission of the instructor
The student will study current theories of language acquisition processes in children and will develop foreign language instructional objectives and activities which integrate language and cultural learning with the content areas of the elementary school curriculum. Through hands-on practice, the student will develop techniques for teaching functional language, planning lessons, testing language skills, setting curricular objectives, and selecting/designing materials appropriate to the needs and interests of elementary school foreign language learners.

**SP400 History of the Spanish Language** 3c-0l-3sh
**Prerequisite:** SP230 or equivalent
Traces phonological, morphological, lexical, and syntactical evolution of Castilian dialect from its origins in vulgar Latin through its development, perfection, and ultimate recognition as the official language of Spain and Spanish America. Places Castilian linguistically with relation to other Romance languages and considers features peculiar to Spanish of Latin America. Taught in Spanish.

**SP402 Translation and Interpretation** 3c-0l-3sh
**Prerequisites:** SP230 and 321
Fundamental translation skills for use in business and industry as well as in academic and popular fields.

**SP403 Applied Linguistics** 3c-0l-3sh
**Prerequisite:** SP230
An introduction to Spanish linguistics for students who have had no previous experience in linguistics. Students will study the application of areas such as phonology, morphology, syntax, and semantics and will explore issues in psycholinguistics and sociolinguistics. Taught in Spanish.

**SP404 Advanced Spanish Grammar** 3c-0l-3sh
**Prerequisites:** SP221 or equivalent and SP230 and senior standing or departmental permission
An in-depth study of Spanish syntax and morphology. Taught in Spanish. Required for all majors.

**SP410 Medieval Literature** 3c-0l-3sh
**Prerequisite:** SP260 or permission
Reading and discussion of various medieval genres: brief prose narrative, epic, lyric, and didactic poetry, prose, and medieval drama. Taught in Spanish; offered in four-year rotation.

**SP411 Golden Age Literature** 3c-0l-3sh
**Prerequisite:** SP260 or permission
Analysis of themes, motifs, and stylistic devices of Spanish poetry, novel, and theater of the Renaissance and Baroque. Taught in Spanish; offered in four-year rotation.

**SP412 The Spanish Novel of the Nineteenth and Twentieth Centuries** 3c-0l-3sh
**Prerequisite:** SP260 or permission
Analysis of selected novels from three major periods: the nineteenth century, the Generation of 1898, and the post Civil War. Taught in Spanish; offered in four-year rotation.

**SP420 Modern Hispanic Theater** 3c-0l-3sh
**Prerequisite:** SP260 or permission
Study and analysis of modern dramatic works from Spain and Spanish America. Particular emphasis will be given to the representational aspect of the works. Taught in Spanish; offered in four-year rotation.

**SP421 Modern Hispanic Short Story** 3c-0l-3sh
**Prerequisite:** SP260 or permission
The critical analysis of short stories by Spanish and Spanish-American authors. Taught in Spanish; offered in four-year rotation.

**SP430 Twentieth-Century Spanish-American Prose** 3c-0l-3sh
**Prerequisite:** SP260 or permission
Traces literary expressions from the turn of the century to the present in the major prose expressions of the essay, the short story, and the novel. Taught in Spanish; offered in four-year rotation.

**SP431 Spanish-American Poetry** 3c-0l-3sh
**Prerequisite:** SP260 or permission
A study of Spanish American poetry from its early manifestations through modernism, post-modernism, and avant-garde. Taught in Spanish; offered in four-year rotation.

**SP481 Special Topics** var-l-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**SP482 Independent Study** var-1-6sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
An opportunity to engage in an in-depth analysis of some topic dealing with the Spanish language and culture through consultation with a faculty member. Approval is based on academic appropriateness and availability of resources.

**SP493 Internship** var-3-12sh
**Prerequisite:** One semester of study in a Spanish-speaking country
A supervised field experience in any Spanish-speaking area of the world with approved public agencies and institutions or private firms, no longer than one semester and no less than one month. Positions will be matched as closely as possible with the intern's personal interests and professional goals. For more information contact the Spanish and Classical Languages Department. Maximum of six credits can apply toward a major.

## SW Social Work
Department of Sociology
College of Humanities and Social Sciences

**SW238 Introduction to Social Work** 3c-0l-3sh
**Prerequisite:** SO151 or AN110
Introduction to the dynamics of helping relationships.

# TH Theater

Department of Theater
College of Fine Arts

**TH101 Introduction to Theater** 3c-0l-3sh
An exploration of the theater arts, examining major periods of theater history, selected works of dramatic literature, and the primary theater arts of acting, directing, design, and technical theater. Class experience includes the analysis of at least two major works of drama, attending two live productions, and viewing of selected televised plays and musicals.

**TH102 Introduction to Dance** 3c-0l-3sh
Examines dance as a performing art in both the historical and cultural contexts. Also includes the analysis of a major piece of choreography, attending live performances, and viewing select works of dance. No previous dance experience is required.

**TH110 Script Analysis** 3c-0l-3sh
Course examines major as well as alternative systems by which dramatic texts may be analyzed, including classical plot construction, scene structure, tension and release, dramatic rhythms, and several contemporary and less conventional methods of dramatic orchestration.

**TH116 Fundamentals of Theatrical Design** 3c-0l-3sh
Introduces the fundamentals of scene, costume, lighting, and sound design for theater and dance. It is focused on creative processes used by designers to make choices. Topics include script analysis, director and designer communication, and the integration of the design elements into a unified production.

**TH120 Stagecraft I** 3c-0l-3sh
Exploration of the material, methods, and procedures utilized in creating a scenic environment. Through instruction and practical application, students learn the basis of scenic construction and develop competency with the basic materials and equipment used in a theatrical scene shop.

**TH122 Costume Workshop** 3c-0l-3sh
Instruction and practical experience in the process of building costumes for the stage. Activities include fitting, cutting, sewing, dyeing, and painting. There is also instruction in the maintenance of wardrobe, costume stock, materials, and properties.

**TH130 Stage Voice** 3c-0l-3sh
**Prerequisite:** Theater majors only, or by permission of instructor
Instruction in basic development of the vocal instrument of the actor in stage performance. Emphasis is placed upon the resonance, quality, pitch, and projection of the voice while improving the student's ability to articulate.

**TH131 Stage Movement** 3c-0l-3sh
Instruction in basic stage movement and the physicalization of character. Includes work in character development through variety in movement, introductory work in juggling, stage combat, and mime, and the assessment, awareness, and correction of individual movement problems.

**TH150 Fundamentals of Dance** 3c-0l-3sh
A basic dance technique that sequentially develops the elements of movement (space, time, force) into a variety of dance genre and period styles. Covers special care and safety of the instrument—the body.

**TH201 Theater History I** 3c-0l-3sh
A comprehensive survey of the history, trends, and developments of theater and drama from their beginnings through the English Renaissance.

**TH202 Theater History II** 3c-0l-3sh
Comprehensive survey of the history, trends, and developments of theater and drama from the English Restoration to the present.

**TH220 Stagecraft II** 3c-0l-3sh
**Prerequisite:** TH120 or permission
Advanced exploration of materials, methods, and procedures involved in creating a scenic environment. Students also receive intensive practical experience in shop planning and supervision to include problem-solving techniques.

**TH221 Basic Stage Lighting** 3c-0l-3sh
**Prerequisite:** TH120
Introduction to lighting instruments, color media, control boards, physical laws of electricity and optics, graphics, and conventional techniques used in lighting theatrical productions.

**TH223 Makeup for the Stage** 3c-0l-3sh
Deals with practical application of straight and character makeup and may include instruction in creating beards, wigs, prosthetics, and masks.

**TH240 Acting I** 3c-0l-3sh
Study of the primary elements of the Stanislavski system of character development. Includes text analysis and the development of physical action through a character's subtext, as well as motivational and improvisational techniques.

**TH250 Contemporary Dance** 3c-0l-3sh
Contemporary dance techniques, improvisation, and choreography. Examines the historical development and cultural influences on the changing philosophies of contemporary dance performance today. Performance of creative work required.

**TH260 Jazz Dance** 3c-0l-3sh
Jazz techniques, dynamics, and style for theater dance from the 1920s through the present. Emphasis on analysis of music for choreography.

**TH270 Ballroom and Tap Dance** 3c-0l-3sh
A sequential development of tap and ballroom dance techniques in the context of historical development and period styles. Performance for an audience is required.

**TH280 Ballet** 3c-0l-3sh
Sequential development of barre and center techniques that progress to linking moves, turning, and jumps, to dance sequences and choreography. The historical periods of development and the status of the art today will be examined in a cultural context which includes gender and minority influences.

**TH281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**TH290 Ethnic Dance** 3c-0l-3sh
Includes dance techniques from a variety of indigenous forms from Western and Eastern cultures. Presented in the historical and social context. Emphasis will be given to the needs of theater production.

**TH301 Tragic Mask** 3c-0l-3sh
Historical survey of theatrical conventions, traditions, and production practices specifically associated with tragedy and its ensuing forms: drama and melodrama. It focuses on landmark dramatic texts, examining the changing faces of tragic masks and their implications for theatrical practice from ancient Greece to the twentieth century.

**TH302 Comic Mask** 3c-0l-3sh
Historical survey of theatrical conventions, traditions, and production practices specifically associated with comedy and its related forms: farce, burlesque, etc. Focuses on landmark dramatic texts, examining the changing faces of comic masks and their conventions, and their implications for theatrical practice from ancient Greece to the twentieth century.

**TH310 Theater Criticism** 3c-0l-3sh
A study of the theory of criticism and of the discrete functions of critic and reviewer. Students see live performances and practice writing both reviews and criticism.

**TH320 Scene Design** 3c-0l-3sh
**Prerequisite:** TH120
An introduction to the principles of scenic composition, analysis, concept development, and graphic communication methods used by the scenographer.

**TH321 Stage Lighting Design** 3c-0l-3sh
**Prerequisite:** TH221
Covers the design and execution of stage lighting with emphasis on script analysis, the collaborative role of the lighting designer, lighting theory, and modern stage lighting practices. Practical applications include the conceptualization and designing of production lighting for Proscenium, Thrust, and Arena stages through class exercises.

**TH322 Costume Design** 3c-0l-3sh
Covers design and execution of stage costumes with emphasis on showing how mood and illusion can be created through the proper selection of style, color, and texture, supplemented by an overview of stage costuming.

**TH323 Sound Design** 3c-0l-3sh
Covers the basic principles and theories of designing sound for the theater. Through demonstration and practical application, the course will cover the following principal areas: basic electronics, recording techniques and equipment, musical and effects integration, theater acoustics, designing sound, and sound reinforcement.

**TH340 Acting II** 3c-0l-3sh
**Prerequisites:** TH240 or permission of instructor
Study of the evolving Stanislavsky system and its American reinterpretations as applied to realism and other dramatic genres and styles. Emphasis will be on scoring of text, exploring the relationships between psychological states and physical action.

**TH341 Acting Styles** 3c-0l-3sh
**Prerequisites:** TH130, 131, 240 or permission of instructor
Study and practice of advanced acting skills with special emphasis on style and period. Possible areas of focus: Greek classical, Commedia Dell'Arte (farce), French Neo-classical, Restoration Comedy, Melodrama, High Comedy (Wilde/Coward), or Theater of the Absurd.

**TH342 Acting Shakespeare** 3c-0l-3sh
**Prerequisites:** TH240, 340 (or permission of instructor)
An advanced acting studio which will prepare students to perform in Shakespeare's plays. This course will provide a background overview of the Elizabethan period in addition to various methods towards approaching the movement, language, and verse forms from an actor's point of view.

**TH345 Touring Young People's Theater** 3c-0l-3sh
This course introduces the fundamentals of young people's theater for audiences aged five through fifteen years. The class will select appropriate children's literature, develop a script through improvisation, and rehearse and tour their production to the surrounding schools.

**TH347 Playwriting** 3c-0l-3sh
**Prerequisite:** TH110 or permission of professor
This course is a practical exploration of the craft and process of playwriting. The primary focus of the course is the practical, "hands-on" experiences approximating the "developmental process" currently in use in the American theater. The student will be guided from the initial concept through synopsis, outlines, working drafts, and culminating in the student's completion of an original one-act play and a "staged reading" of this project.

**TH350 Directing** 3c-0l-3sh
**Prerequisites:** TH110, 240, permission
Introduction to basic directing skills: casting, floor plans, blocking, rehearsal procedures, and the applications of scene and character analysis. Students will prepare short scenes for class presentation.

**TH351 Choreography** 3c-0l-3sh
**Prerequisite:** must have taken one of the introductory or advanced-level dance classes (TH150, 250, 260, 270, 280, 485) or permission of instructor
This course introduces the necessary choreographic tools needed to manipulate dance as a medium to create dance works. The class will learn and use various approaches to the choreographic process to create dance works, one of which will be presented in a public showing at the end of the semester.

**TH353 Dance Curriculum and Instruction** 3c-0l-3sh
**Prerequisites:** One of the following theater courses: TH250, 260, 270, 280, 290, or 485; or permission of the instructor
This course introduces the necessary teaching skills and curriculum development needed to understand the pedagogical structure for teaching dance. The class will learn the approaches to teaching that are unique to dance and will learn how to design dance curriculum.

**TH481 Special Topics** var-1-6sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**TH482 Independent Study** var-1-6sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Independent study in theater may be either purely academic or may be a practical production project, supported by a written document giving evidence of significant scholarly investigation or original, creative effort. May be repeated to a maximum of 6 credits. Approval is based on academic appropriateness and availability of resources.

**TH483 Acting Studio** 3c-2l-3sh
**Prerequisites:** Minimum of TH240, by permission; individual foci have additional prerequisites
Advanced studio course offering scene practice with faculty direction, coaching, and criticism. Specific focus of scene work varies from semester to semester, including improvisation techniques, stage dialects, audition techniques, and acting for the camera as alternating semester options. May be repeated with a different focus each time.

**TH484 Directing Studio** 3c-2l-3sh
**Prerequisites:** TH350, permission
Opportunity for students to direct scene work, one-act plays, or larger projects, according to individual levels of experience, preparation, and readiness. Practical application of principles of directing to specific problems in directing. Student projects performed in public, open-class recitals. May be repeated.

**TH485 Dance Studio** 3c-0l-3sh
**Prerequisites:** TH250, 260, 270, or 280 (beginning technique class taken must be the specific dance genre of the Dance Studio class offered); or by permission of instructor
Furthers the development of the dancer at the intermediate level of a specified genre of dance. Development in dance requires the integration of both technique and artistic development. The specific genres vary from semester to semester, including modern, ballet, tap, and jazz as alternating semester options. May be repeated with a different focus each time.

**TH486 Practicum in Production** var-.5-4sh
**Prerequisite:** Permission of instructor
An opportunity with academic credit for students to make significant contributions to campus productions augmenting theater coursework in the areas of assistant directing or directing, stage management, technical direction, sound design, lighting, scene design, properties and set decoration, scene building and painting, costuming, dance, and make-up design. May be repeated.

**TH489 Technical Theater Problems** 3c-0l-3sh
**Prerequisite:** Permission of instructor
Open to all students desiring instruction in a variety of technical theater areas not presently covered in other courses. Topics to include sound design, stage management, set props, media make-up, technical drawing/mixed media, and scene painting. May be repeated.

**TH493 Internship** **var-3-12sh**
**Prerequisite:** Permission of instructor
Opportunities for students to gain experience with professional performance organizations in areas related to theater and dance.

## Universitywide Courses
## Academic Affairs Division

**UN480 T.H.I.S. Seminar** 3c-0l-3sh
Academic seminar taken at the State System of Higher Education University Center in Harrisburg in conjunction with the T.H.I.S. internship. Consists of public policy information, decision making, and budgeting and addresses question-and-answer sessions with leading state government policymakers. See descriptions under Academic Affairs areas. Restricted to the T.H.I.S. internship participant. See UN493.

**UN493 T.H.I.S. Internship** var-12sh
Practical experience at the policymaking level of the state government that also requires a research project. Student must have a 3.0 GPA and submit a sample of writing skills with the application to the Experiential Education Office. Open to any IUP major. See description under Academic Affairs areas. Concurrent seminar course required. See UN480.

## VO

### Vocational Education
Center for Vocational-Technical Personnel Preparation
College of Education

**VO 010 Industrial Electrical Technology** var-1-18sh
**Prerequisite:** Center/department permission
Emphasis on comprehensive industrial electrical technology through training in specialty concentrations applied to design, development, and testing of electrical circuits, devices, and systems for generating electricity and the distribution and utilization of electrical power. Carries institutional credit only.

**VO100 Preparation of the Vocational Professional I** var-1-15sh
Personalized, self-paced vocational teacher preparation. The vocational student/intern develops, demonstrates, and documents competence in selected pedagogical competencies. Individualized instruction is supplemented with monthly seminars. Self-evaluation is encouraged in the program, utilizing videotaping and the feedback from a team of professional teacher educators.

**VO281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**VO395 Vocational Education Writing Experience** var-0sh
Writing assignments such as abstracts, logs of activities, philosophy papers, training plans, presentation plans, lesson plans, etc., will be completed in conjunction with selected instructional modules from VO100 and VO400 courses.

**VO400 Preparation of the Vocational Professional II** var-1-15sh
**Prerequisite:** Successful completion of VO100
Personalized, self-paced vocational teacher preparation. The vocational student/intern develops, demonstrates, and documents competence in selected teaching skills in the areas of program planning, program development, program evaluation, and managing and evaluating instruction in a vocational school setting. Self-evaluation is encouraged in the program utilizing videotaping and the feedback from a team of professional teacher educators.

**VO401 Special Topics in Vocational Technical Preparation** var-1-12sh
**Prerequisite:** Center permission
Provides opportunities for vocational students/interns to develop additional technical skills in areas related to their occupational competence under professional supervision. Topics are determined through individual counseling, through priority needs identified by advisory committees, and through evaluation of technical competence by center teaching staff.

**VO402 Special Topics in Vocational Pedagogical Preparation** var-1-15sh
**Prerequisite:** Center permission
Provides opportunities for vocational students/interns to develop additional teaching skills under professional supervision. Topics are determined through identification of priority areas in vocational education using national and state surveys and students' individual needs.

**VO450 Technical Preparation of the Vocational Professional** 24sh
Competency assessment of occupational experience through national standardized written and performance examinations.

**VO481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**VO482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

## WS

### Women's Studies
Women's Studies Program
Academic Affairs Division

**WS200 Introduction to Women's Studies** 3c-0l-3sh
Focuses on women as they are and as they have been—as represented by the work of writers and as presented in the theory and research of various disciplines. Historical and contemporary images of women are examined in terms of their impact on our lives. The relationships of women to social institutions such as education, religion, and health care are explored. Alternative theories explaining the roles and status of women are compared. Attempts to help us understand the choices and experiences women face in their everyday personal, work, and public lives.

**WS281 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**WS481 Special Topics** var-1-3sh
**Prerequisite:** As appropriate to course content
Special topics courses are offered on an experimental or temporary basis to explore topics that are not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**WS482 Independent Study** var-1-3sh
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and provost's office
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

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